

Railway Age

Vol. 81, No. 11

October 2, 1926

Table of Contents Appears on
Page 5 of Advertising Section

Railroad World Championship Meet a Fiasco

A "RAILROAD world championship athletic meet" was held by the Philadelphia Sesqui-centennial Exposition last Saturday, September 25. Twelve railroads participated. The exposition people fell down badly on the arrangements; they gave the meet practically no publicity. Admission was free, yet the Sesqui bulletins of activities for the day made no mention of it; consequently few of the crowds at the Sesqui that day knew that the meet was in progress. On Saturday morning when preliminaries were scheduled the cinder track in the stadium was still obstructed by temporary seats put there for the Dempsey-Tunney fight two days before. With the finals due to begin at 2 p. m., it was not possible to start even the preliminaries until 3 p. m. Necessarily, therefore, several events, including a ball game, had to be cancelled. By way of contrast, on the Saturday previous the Pennsylvania had its system meet in the same stadium and there were 50,000 spectators who had to pay for admission, against about 1,000 at the inter-railroad meet when admission was free. The secret of the whole business lies here.—The P. R. R. meet was managed by railroad men who were interested in their work; the "railroad world's championship" was an exposition affair. Opinions may differ as to the advisability of holding a big inter-railroad athletic meet such as this purported to be. However, if such a thing is again undertaken, it is quite clear that it should be managed entirely by a committee representing the participating railroads. To allow uninterested outsiders to stage such an affair is to invite a waste of the athletes' time and of good railroad money.

Better Training Methods

"A PERIODIC inventory of physical material and equipment is taken for granted by all industries; but what about taking stock, at least now and then, of the personnel—its assets and liabilities, and in particular apprentice problems?" This significant statement appears in the preface to a report on apprenticeship, published by the Department of Manufacture of the Chamber of Commerce of the United States. It is the second in a series of such studies on problems of human relations in industry, the first one being on foremanship. The report on apprenticeship presents data concerning the development and status of industrial training. It is of special interest to the railroads at this time because of the renewed and extended interest now being taken in apprenticeship in the mechanical departments of a number of roads, as well as the growing appreciation on the part of railway officers in general, of a more careful selection and training of boys and young men entering the service in all departments. Although not touched upon in the report, it is interesting to note the variety of

training methods which are being used for railway mechanical department apprentices. While several roads have adopted the so-called Santa Fe method, adapting it to their peculiar conditions, other roads have enlisted the co-operation of outside agencies in various ways and in varying degrees. It is only a question of time, therefore, when sufficient data will be available to get some idea of the comparative effectiveness and value of these methods. Meanwhile the inspiring thing is that the need of better and more thorough training methods is becoming so generally recognized in both the industrial and transportation fields.

Up-to-Date Educational Methods

THE importance of the problem of teaching and training new employees, and the older ones as well, is being more and more generally recognized on the railroads as well as in the industries. Mrs. Frank B. Gilbreth in the opening address at the recent Conference on Human Relations in Industry at Silver Bay, challenged the attention of those present by commenting on the steady and rapid progress which is being made in the science of teaching, and suggested that even though an industry may have taken an outstanding educator into its organization within the past four or five years to assist in directing its training program, it would still be necessary to keep in close touch with the developments and improvements which are being made in educational methods. This, to most of those in the audience, appeared to be a striking statement. It is interesting to note in this connection that English railways in promoting training programs, solicit the co-operation of members of university and technical school faculties. In this country, also, there is a tendency on the part of the railroads to seek assistance and co-operation from the federal and state departments of vocational education, from the industrial extension departments of the universities, and in some cases from the local school authorities. Might it not be well to check up the efficiency of the educational methods now in use in the different departments and to seek expert counsel where new training methods are under consideration?

Crossings Easily Made Safe

THE usefulness and appropriateness of a simple means of compelling automobile drivers to limit their speed to a reasonable rate when approaching a railroad crossing is a subject which seems not to receive the attention that it ought to receive—very little as compared with the possibilities of improvement which a speed-limit offers. Railroad experience in dealing with crossings of tracks, one with another, which experience extends over nearly a century, affords very definite lessons for municipal and state authorities, but such les-

sons seem to be but little heeded. This subject is brought to mind by a letter from a correspondent in California telling of what he has observed at a street crossing, of a busy double-track line, close to the station where he boards the train every day. He says:

This crossing was sufficiently rough so that autoists always slackened speed when crossing, and there were very, very few accidents. But the railroad company has rebuilt the crossing, and the roadway for automobiles is now so perfectly smooth that no driver hesitates to go over it at full speed; and within less than a month two automobiles have been struck by trains. Evidently the autoist has a very lively regard for the safety of his machine when he is considering possible damage from driving over a rough road, yet little or no regard for the danger from trains. Incidentally, the watchman at this crossing, who has the aid also of a wigwag signal, concludes that what he ought to have is a "stop-and-go" sign, such as are used at intersections of streets in cities.

Roughening the surface of the highway for a short distance has been recommended by competent engineers, as has also the construction of artificial humps. A third plan, that of blockading the center of the street and compelling everybody to take a detour which cannot be traversed except at limited speed, has been tried in Delaware and in Florida, though in a very mild form and at but very few places. It is regrettable that no state or city has tried any of these schemes at crossings where highway travel is heavy. Attention should be given to such crossings, for it will be necessary to accumulate a large body of experience in order adequately to impress the lesson that only the most rigid regulations can be depended upon to compel drivers uniformly to pay due heed to safety rules. Leaving anything to the discretion of the driver is sure to postpone indefinitely the accomplishment of a reasonable degree of freedom from what has become, in newspaper offices, an everyday tragedy. The railroad officer has a duty to remind municipal officers—diplomatically of course—of their duty to keep municipal practice up to date; to safeguard crossings according to the latest and most mature engineering opinion. It is not in the interest of sound public policy for a railroad to bear more than its fair share of the burden of making crossings safe, as railroads sometimes do when a number of people have been killed and everybody is actuated by sentiment or sympathy.

Railway Efficiency and Stabilization of Industry

ONE of the results of the efficiency displayed by the railways in handling the unprecedented flow of traffic during the present year has been the stabilization of industry and the flattening out of the curves of both employment and inventories. While this lacks the spectacular interest that is aroused by a succession of million car weeks, it is of vital interest alike to the manufacturer, the merchant, the workingman and the railways themselves, since it assures that steady progress of effort that is more productive than the spasmodic succession of feverish activity and depression that have so often attended the cycles of prosperity in the past. The manufacturer, knowing that his product can be distributed without delay, can prepare his program to secure the best results from his facilities and finds that his labor turnover is lessened; the mechanic is assured of steady employment; the merchant is free from the necessity of piling up goods that may constitute a serious menace on a falling market, and the railroads themselves, with the commodities they haul presented for transportation at a fairly uniform rate, find themselves handling, not without effort, it is true, but without serious congestion or car shortages, volumes of freight which would have seemed impossible a few years ago. Aside

from its effect on transportation, this stabilization rounds to the benefit of the railways in other directions. Like the merchants, the railways have been able to reduce stocks of material and supplies on hand and they likewise find that their labor turnover is decreased, with the result that they are not compelled, as they have been so often in the past, to take on large numbers of inexperienced men at the very time when men of experience are the most needed. To obtain the full benefit of stabilized labor, however, the railways must find, as many of them are endeavoring to do, some way to keep their vast army of maintenance of way employees at productive work the year round. It is too much to hope that this can be fully accomplished, but much may be done along these lines, and serious study is being devoted to the question, as was evidenced at the recent convention of the Roadmasters' and Maintenance of Way Association in Chicago. The report of the Committee on The Rearrangement of Track Work to Promote More Uniform Employment, together with a paper on the same subject by Lem Adams, roadway assistant on the staff of the president of the Union Pacific, are worthy of careful attention and should lead to beneficial results.

Keep the Roadmaster Out on the Line

NO railway officer has greater demands on his time than the roadmaster. The very nature of his duties implies that he must spend the maximum amount of time on the line during the hours of the day when the gangs employed on his subdivision are at work. Consequently his office work is often done in the evening or on Sundays, and owing to the exigencies of train schedules, he is often required to begin his day on a train leaving at an early hour in the morning and is prevented from starting his office work until the arrival of a train late in the evening. If his duties in the office were limited to the handling of such matters as definitely require the exercise of his judgment and authority, the matter of evening or Sunday work would not be so serious, but in too many cases the roadmaster has little or no clerical assistance or must be content with a clerk of such limited ability that he, himself, must carry on routine office work that takes more time than even the most ambitious or robust man can expect to handle outside of daylight hours. A roadmaster who has a good clerk can conserve his time and energy for the most productive use of his time in the field. He will not only be enabled to spend more of his time on the road but he will also find it possible to ride motor cars and thus be enabled to speak to his foremen rather than to drop off "butterflies" from passing passenger trains. A good clerk can also do much to conserve the time of his chief through the use of telegraph or telephone facilities to keep him constantly in touch with developments during the day. Railway managements have inculcated in their supervisory officers the fundamental principle that their place is out on the line, and every operating or maintenance officer should endeavor to spend as many of his working hours away from the office as it is possible for him to do. With the growing appreciation of the need for more intensive supervision of railway forces this is now more essential than at any time in the past. A more thorough appreciation of the need of human contact between men and management has done much to intensify the demand for closer relations between the supervisory officer and the foremen. As was pointed out by C. A. Morse in his address at the annual dinner of the Roadmasters' Association which

was abstracted in the issue of last week, adequate clerical help for the supervisory officer is one requisite for "Placing the track department on a business basis."

Unprofitableness of Passenger Business

PERHAPS the most interesting and significant statistics ever compiled regarding the earnings derived by the railways from freight and passenger train service, and the expenses incurred by them in rendering these two kinds of service, appear in a study entitled "Unit Costs of Railroad Service—1915-1925," which has been made recently by the Bureau of Statistics of the Interstate Commerce Commission. It always has been recognized as an extremely difficult thing to make any satisfactory apportionment of operating expenses and taxes between the different services rendered by the railways. After years of effort a formula for allocating them was adopted by the commission and is now used by the railways in making reports to it. The unit costs in the recent study of the commission's Bureau of Statistics were arrived at by the use of this formula.

One fact which these statistics make stand out very prominently is the declining profitableness, or to state the matter more accurately, the increasing unprofitableness, of passenger service. It is well known that during the last six years a large part of the passenger traffic of the railways has been taken from them by the private automobile and the motor bus, especially the former. What is not well known is the effect that this has had upon the net operating income derived from passenger service. This is illustrated by the fact that the Senate Committee on Interstate Commerce, in a report made during the last session of Congress, intimated that the so-called "surcharge" should be abolished and that the profits from passenger service of which the railways would thus be deprived should be recouped by advances in unprofitable freight rates. The facts given in the statistical study in question show that during the time the railways have been getting the surcharge, and the number of travelers who prefer to ride in sleeping and parlor cars and pay the surcharge has been rapidly increasing, the net return derived by the railways from their total passenger service has been steadily declining. The final outcome in 1925 was that the railways derived relatively less net operating income from passenger business than in any previous year, and that the railways of the western district handled it at an actual operating loss.

The study made by the commission shows that in the so-called "test period"—three years ending on June 30, 1917—the total average earnings received by the railways from operating each car in a passenger train one mile were 27.065 cents. The operating expenses and taxes chargeable to the service were 19.2 cents. The difference was a "net operating income," or net return, of 7.866 cents. In 1917, when passenger traffic was relatively large, and before most of the great war time increase of operating expenses had occurred, the net return derived from running each passenger train car one mile increased to 9.375 cents.

Under both government operation, and again in 1920 after the return of the railways to private operation, passenger rates, as well as freight rates, were advanced. Since then, however, while freight business has increased, passenger business has greatly declined, the decline being entirely in passenger riding in day coaches. The largest amount of net operating income since de-

rived by the railways from operating each passenger train car one mile was in 1923, when it was 4.697 cents—a very large reduction since the test period, and especially since 1917. In 1925 the average total earnings per passenger car mile were 37.567 cents. The operating expenses and taxes chargeable to the service were 34.635 cents, or 92 per cent of the earnings from it. In consequence, the net operating income earned per car mile was only 2.932 cents, or less than one-third as much as in 1917.

These are the figures for the railways of the United States as a whole. Those for the railways of the eastern and southern districts are not so bad. The railways of the eastern district earned a net operating income of 9.294 cents per passenger car mile in 1917 and of 6.12 cents in 1925. Those of the southern district earned a net operating income of 11.52 cents per passenger car mile in 1917 and of 4.2 cents in 1925.

The railways of the western district made the worse showing of all. In 1917 their net operating income per passenger car mile was 8.7 cents. In 1925 their total earnings per passenger car mile were 32.13 cents, their operating expenses and taxes were 33.025 cents, and, instead of getting any net operating income at all, the operating deficit incurred by them, on the average, in hauling each passenger car a mile was 8.95 mills. The total passenger car miles of the western lines in 1925 were 1,513,399,000, and, therefore, their operating deficit from passenger train service, according to the commission's figures, was about \$13,545,000.

The allocation of costs made according to the Commission's formula, it should be noted, includes no charges for return upon investment or valuation, as no satisfactory method of dividing investment or valuation between freight and passenger service has been devised. The unit cost figures of the commission's Bureau of Statistics show clearly, however, that in all parts of the country the net return derived by most railways from passenger service is small, or less than nothing, and that for the western railways as a whole it is less than nothing.

Such facts have a very direct bearing upon the constant agitation for abolition of the so-called "surcharge." The decline in the net return of the railways from passenger service is entirely due to the decline that has occurred in travel in day coaches, for travel in sleeping and parlor cars to which the surcharge applies has increased about 25 per cent since 1921 and is still increasing. This increase of travel in sleeping and parlor cars and the collection of the surcharge upon it are the only things that are preventing the passenger business of the eastern and southern lines as a whole from being handled at a net loss. Not only was that of the western lines handled at an actual net operating loss of more than \$13,500,000 in 1925, but it would have been handled at a net operating loss of more than \$30,000,000 except for the fact that the western lines derived about \$17,000,000 from the surcharge.

It would be impossible for the railways to increase their earnings from passenger business by making a general advance in their passenger rates, because undoubtedly this would increase their loss of day coach business to the private automobile and the motor bus. The abolition of the surcharge would simply deprive them of about \$40,000,000 annually of passenger earnings which the public, by its increasing use of sleeping and parlor car service, is indicating that it is willing they should have, and thereby increase by that much the loss from passenger business which would have to be made up from earnings from freight business. There is no sound argument whatever that has been or can be advanced in favor of any such policy.

How Demagogues Misrepresent Railways

RAILWAY officers often have complained about the gross misrepresentations of their business that are resorted to by demagogues. The demagogue who is seeking especially to get the votes of the farmers always has insulted the intelligence of his hearers by what he has told them about railway matters more than any other class of demagogue, although usually those who are seeking the votes of working men by attacking "capital" run him a close second.

Never in the many years that railway rates have been the subject of discussion in farming territories has any demagogue resorted to more extraordinary misrepresentations of railway affairs than those that have emanated from former Senator Smith W. Brookhart of Iowa ever since he broke into public life. Some of Mr. Brookhart's statements were dissected in a recent address by E. T. Meredith of Des Moines, who is the publisher of "Successful Farming" and formerly was secretary of agriculture. Mr. Meredith had publicly charged Brookhart with being a demagogue. Brookhart replied in his usual wild way by alleging that Mr. Meredith was "unfriendly to the farmer, aligned with Wall Street, incompetent," etc. Mr. Meredith answered by calling attention to the fact that he could hardly afford to be unfriendly to the farmer, since the prosperity of his papers depends upon the prosperity of the farmer, and added that, anyway, the real question in controversy between him and Brookhart was whether the latter is a demagogue. After exposing the falsity of Brookhart's charge that the Federal Reserve Board acted in 1920 in accordance with a secret conspiracy to deflate the farmer, Mr. Meredith answered a charge that the former Senator had made regarding "excessive railroad charges" in Iowa.

"Recently a Des Moines newspaper in editorial comment cautioned any man who might have the temerity to question the accuracy of any of Brookhart's figures," said Mr. Meredith. "Without hesitation I accept that challenge. As a single instance, out of many, recently at Lake Wood Park Mr. Brookhart said, 'The excessive railroad charges amount to the same as a mortgage of over \$20,000 on every farm in the State of Iowa.' There are 213,481 farms in Iowa (World Almanac, 1926). A mortgage of \$20,000 at 5½ per cent interest would mean an interest charge of \$1,100 on each farm or a total annual charge of \$234,849,100 annual interest. The gross earnings of all railroads in Iowa in 1924 were \$144,006,421, or \$90,822,679 less than Mr. Brookhart claims for excessive charges alone. In other words, Brookhart claims that the so-called 'excessive charges of railroads' amount to \$90,822,679 more than the gross earnings in this state of all railroads without making any reductions for wages, operating expenses, repairs, renewals, taxes or any other expenses. Brookhart is saying that the excessive part of the railroad rates amounts to nearly twice the amount of total charges of railroads.

"It goes without saying that all excessive earnings of the railroads should be abrogated. If railroads should be deprived of what Brookhart declares to be 'excessive earnings' the railroads of Iowa would be deprived of every dollar of their gross earnings, but would still be required to pay \$90,822,679 for the privilege of operating their lines in this state for nothing. I hold no brief for the railroads and I am not defending their rates. The point I am making, and the only point,

is this—that while figures don't lie, liars do figure."

Mr. Brookhart's assertion that "excessive" railway rates are costing the farmers of Iowa alone some \$91,000,000 annually more than the total gross earnings derived by the railways from all their passenger, mail, express and freight business in that state, including not only what the farmers pay but what all the other people of the state pay, is a rather extreme example of the kind of misrepresentation to which the railways are subjected. He is not without rivals, however. Not so very long ago another demagogue asserted in Wisconsin that the Esch-Cummins Transportation Act is costing every family in that state one dollar a day. Since the total earnings of the railways now average only about 65 cents per family per day, this would indicate that before the Esch-Cummins act was passed they were paying each family a very substantial amount daily and annually for letting them render its transportation service,—an exaggeration quite as violent as that of Brookhart which Mr. Meredith answered.

The fact that men who employ such misrepresentations often actually gain the confidence of the people sufficiently to get elected to office illustrates the difficulties that must always be overcome in securing the adoption and maintenance of a fair public policy in dealing with any industry that is subject to government regulation.

Reduced Number of Separately Operated Class I Roads

THE list of Class I operating railroads filing separate reports with the Interstate Commerce Commission seems about to be reduced to something like 175 or less if the acquisition applications now pending before the commission are granted. The list has already been reduced from 204 in 1920 to 185 in 1926 (including large switching and terminal companies), chiefly as a result of absorptions into the larger systems under long term leases authorized by the commission under paragraph 2 of section 5 of the consolidation provisions of the interstate commerce act.

Class I railroads are those having annual operating revenues of \$1,000,000 or more and some changes are made in the list because of changes in the earning status of the roads, but at least 20 Class I roads that reported separately in 1920 are now included in the reports of the larger systems and approximately a dozen more will probably lose their separate identity so far as reports and public appearance are concerned if the commission approves the pending applications.

The application of the Texas & New Orleans for authority to unify the control and operation of the Southern Pacific lines in Texas and Louisiana by lease, which covers eleven roads having a mileage of over 4,000 miles, would reduce the number of separately operated Class I roads by five—the Louisiana Western, Morgan's Louisiana & Texas, the Galveston, Harrisburg & San Antonio, the Houston & Texas Central and the Houston East & West Texas. The San Antonio & Aransas Pass, which is also included, has already been leased to the G. H. & S. A. Other pending applications propose the acquisition of control by larger companies of the Atlanta, Birmingham & Atlantic, the Buffalo, Rochester & Pittsburgh, the Cleveland, Cincinnati, Chicago & St. Louis, the Lehigh & New England, the Michigan Central and the Virginian.

In most of the cases the smaller companies that thus

disappear from the list were previously controlled more or less directly by the same larger systems that were authorized to acquire more direct control for the purpose of simplifying their corporate structures and effecting economies, but many of the cases represent the acquisition of shorter lines not previously controlled and all of them are in the direction of more complete consolidation. The proposed leases by the New York Central of the Big Four and Michigan Central represent no change in control, as the Central has long owned most of the stock of both companies, but they are a step toward the kind of complete consolidation which took place when the Lake Shore & Michigan Southern and the New York Central & Hudson River were combined into the New York Central Railroad but which is not permitted under the present law until the commission shall have promulgated a complete consolidation plan.

Acquisition of control such as may be authorized by the commission under paragraph 2 of section 5, whether under lease or otherwise, does not always mean the disappearance of the company from the list of Class I roads, because the commission sometimes requires, as in the case of the joint lease of the Carolina, Clinchfield & Ohio by the Atlantic Coast Line and the Louisville & Nashville, that a separate organization be maintained, and there have also been many important acquisitions of control by stock ownership which have not yet resulted in consolidated operation, as in the case of many companies acquired by the Missouri Pacific.

On the other hand the Pennsylvania Railroad, for example, whose reports to the commission in 1920 covered about 7,000 miles, is now reporting directly for over 10,000 miles of its system.

Post-Mortems

HOW many railway officers know what their various operations cost. Still more important, how many officers know these costs sufficiently promptly to enable them to use the figures? It may be said without fear of successful contradiction that the answer to both of these questions, and especially to the last one is in the negative on the majority of roads. In this respect, the railways have much to learn from many other industries.

Cost figures have assumed a new importance in recent years. Prior to a decade or two ago the primary problem confronting transportation officers on the firing line was to move the traffic offered in each recurring period of business activity, while that of maintenance of way and mechanical officers was to get their work done in the way that would best meet the needs of the transportation department. Of late, however, the constantly tightening net of regulation has forced the roads to search for every opportunity to reduce their costs in order to maintain their earnings and their credit. In the attainment of this objective accurate knowledge of the facts is the first essential. These facts in the form of cost data are not now available.

No one can make much progress in the reduction of his costs until he has information regarding his present costs in sufficient detail to enable him to analyze them and locate places offering opportunity for improvement. It is true that figures are generally available from the auditor some months after the work is completed, but the details of the methods used are largely forgotten by that time and the information is not usable until work of the same character is again undertaken.

Some progress is now being made. On one road the cost of train operation is known by noon of the day fol-

lowing. On another road the cost of renewing ties is known by the division officers with equal promptness. In each of these instances supervisory officers are able to detect changes in conditions and to adopt measures to arrest increases in costs promptly without waiting for the "post-mortem" analyses in the usual channels. It is true that certain approximations are necessary in the compilation of these figures but they are still sufficiently accurate to serve their purpose. The important consideration is that the figures are available while the work is being done, not after.

On the relatively few roads on which such data are being collected there is ample evidence of their value in the control of costs. Declines in traffic can be offset immediately by reductions in service, while comparisons of costs enable the "high" forces to be identified and corrective measures adopted. In other words, cost figures are a detector of leaks, and it is through the removal of these leaks, or unnecessary drains on railway revenues, that further progress can be made in the reduction of costs. The real measure of the value of cost figures to the man on the firing line is not what they prove after the work is done, but rather the extent to which they enable him to reduce his costs while the work is under way.

Retiring Antique Motive Power

"WEARING out antique power is an expensive luxury on any railroad." This statement, by O. S. Jackson, superintendent motive power and machinery, Union Pacific, in his paper read before the Traveling Engineers' Association convention last week, no doubt voices the opinion of many other executive, operating and mechanical officers who have studied the effect of locomotive capacity and efficiency on railroad capacity and ton-mile operating cost. The particular significance of Mr. Jackson's statement, however, lies in the remarkable demonstration of the soundness of this opinion afforded by the experience of his own road. In the new Union Pacific type locomotive advantage has been taken of modern developments in locomotive design and equipment to build a non-articulated power unit of exceptionally high horsepower capacity and high thermal efficiency. Comparisons have been made of the service of this locomotive and of an older Mallet type with the same starting tractive force. Its performance on an 0.8 per cent grade between Laramie, Wyo., and Evanston, is summed up in Mr. Jackson's statement that "it has demonstrated its ability to produce 80 per cent more ton-miles per hour than the Mallet" and that "it has demonstrated its ability to produce these results on slightly less than half the Mallet fuel per 1,000 gross ton-miles."

It takes capital to throw away old and purchase new locomotives, and the burden of the carrying charges on that capital will continue throughout the life of the locomotive. The extent of the added burden, however, is not measured by the cost of the new locomotive but by the difference in the cost of the new and the old. If depreciation has not been charged off for the old equipment at an adequate rate, it will also cost an increase in operating expenses to retire the old equipment. This, however, affects one year's operation alone, while the effect of the economy of the new locomotive is continuous.

The possibilities offered by the most modern developments in several directions for the production of locomotives of high horsepower capacity and high fuel economy, that can produce operating results of the order of those effected by the Union Pacific, are by no means

limited to a few railroads, for such possibilities have been available for but a few years. In general, conditions could hardly be more favorable for taking advantage of them than now. The present favorable earnings offer an opportunity to take care of retirement charges without adversely affecting operating expenses and the same conditions are favorable for securing of the necessary new capital.

When increasing business demands more motive power capacity, the higher average of efficiency and capacity of the locomotives in service effected by the replacement of obsolete power now, will be of tremendous advantage not only in improving operating efficiency but in increasing the capacity of other railroad facilities. In the meantime the full advantage of motive power of high horsepower capacity and high efficiency will be felt in reduced operating expenses.

Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian,
Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

Airmen and Aircraft, by Major Henry H. Arnold. A history of aeronautical development and air transport to the present time for the general reader. 216 p. Pub. by Ronald Press, New York, \$3.50.

Clearing the Way for the Comforts of Life 1826-1926. A brief and attractively illustrated historical sketch of land transport in this country from the saddle horse on a sort of a trail to the oil-electric locomotive. 16 p. Pub. by Ingersoll-Rand Company, New York City. Apply.

Maine Railroads, by Edward E. Chase. A history prepared primarily for non-railroaders, and for the purpose of presenting Maine's development outside the range of war and politics. 145 p. Pub. by the author in co-operation with Beyer and Small, and available from A. J. Huston, Portland, Me., \$2.

A Manifest Destiny, by Arthur D. Howden Smith. A novel of steamship and other concessions in Nicaragua in the 1850's when speed to California gold-fields was an item, that furnishes interesting contrasts to the transcontinental flights described in the first book in this list, and the transcontinental railroad noted in the second. 530 p. Pub. by Brentano's, New York, \$2.50.

The Relation of Transportation Costs to Costs of Production for the Purposes of Section 315 of the Tariff Act of 1922, by U. S. Tariff Commission. Contains reasons for and against inclusion of transportation costs in costs of production, opinion of Attorney General, citations to cases, etc. 94 p. Pub. by Govt. Print. Off., Washington, D. C., 15 cents.

Periodical Articles

It Isn't Hard to Build Up a Good Electric Railway Library, by Lewis A. Armistead. The practical suggestions in this article on what books to have, and what to do with them to keep them useful will probably be helpful to those interested in building up a steam railway library. *Aera*, Sept., 1926, p. 198-212.

Labor Banks in the United States: A List of References, by Laura A. Thompson. Material on history and development of banks of the Brotherhood of Locomotive Engineers and other organizations. *Monthly Labor Review*, Sept., 1926, p. 205-214.

The Locomotives of the Chicago, Burlington & Quincy Railroad, by Paul T. Warner. First article, bringing the history of the Burlington's motive-power down to 1905. *Baldwin Locomotives*, Oct., 1926, p. 13-137.

Pullman Car Innovation on French Railway. Description of new equipment for the "Golden Arrow Express," the Pacific type locomotive used, etc. Profile of Nord Railway between Paris and Calais included. On its inaugural run the "Golden Arrow" ran the 185.2 miles in less than 185 minutes. *Modern Transport*, Sept. 18, 1926, p. 5-6.

The Yunnan Kopei Railway, by E. P. Williamson, Jr. A railway built to transport tin, and notable for some unusual construction and operating features. *Baldwin Locomotives*, Oct., 1926, p. 3-10.

Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

Officers Should Prove Merits of Positive Meet

SAN FRANCISCO, Cal.

TO THE EDITOR:

After reading the letter of W. S. Carr entitled, "Experience with the Positive Meet," published in the RAILWAY AGE of September 4, I am of the opinion that there is a great deal of unnecessary discussion on the subject. I have worked both systems, east and west, and have learned that unless a writer on this subject has had actual experience as a train dispatcher and not as an operator, he is not in a position to discuss it intelligently.

Those who favor the positive meet wish to make all trains of the same class equal. This will not work on many railroads. Mr. Carr's reference to the railroad where eastward trains were superior from midnight until noon and westward trains superior from noon to midnight, with 37 exceptions affecting about 50 trains, does not give a good example of American operation. I admit that the full-faced type in a timetable where superiority by direction applies, is a convenience and not a necessity.

On September 13, a western road handled a total of 16 green fruit trains and 7 passenger trains eastward over a distance of 138 miles, while 14 drags and 7 passenger trains were moved westward, with 10 intermediate train order offices. This is by no means the heaviest traffic the road has handled. The green fruit comes at all hours. It would be impossible to make schedules to fit the time of departure of these trains. The road referred to has four eastward freight schedules dividing the 24 hours equally, and the signals of one schedule are displayed until they run into the time of the next. Westward freights are run extra. Sections eastward are put on time orders and westward extras are required to make their own meets. Trainmen and enginemen, of course, prefer that the dispatcher arrange the meets, as he then assumes responsibility rightfully belonging to the train and enginemen.

It would be a great pleasure to have the "positive meeters," dispatchers or higher officers demonstrate that their system is the best for western railroads. If they can move the trains on some of our western railroads with the "positive meet" system and get the important fruit and stock trains over the road within their allotted time, I will take my hat off to them. They would, in my opinion, tie the road up so tight in 5 hours that it would take 12 hours to loosen it up. I am not against the "positive meet" system. It will work fine on some roads but not on others. Why not allow each road to use the system that best suits its conditions. Eastern operating men and dispatchers should investigate the conditions in the west and middle west before trying to tell how to handle the business in this territory.

WM. NICHOLS,
Southern Pacific.



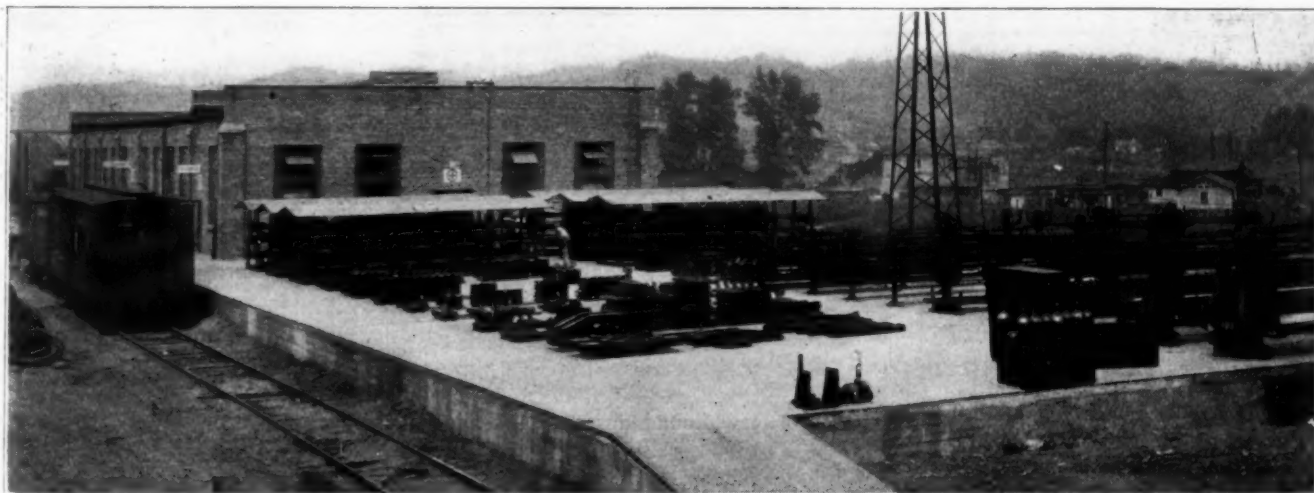
The Power House Shop Building and Old Roundhouse, with a Small Portion of the New Roundhouse Showing Between the Power House and Machine Shop

An Effective Combination of New and Old Roundhouses

Chesapeake & Ohio increases capacity of engine terminal at Russell, Ky., in an interesting manner

IN providing greatly increased capacity in its engine terminal at Russell, Ky., the Chesapeake & Ohio worked out an effective plan of combining the new facilities with the old without committing the plan for the new facilities to any objectionable features in consequence of efforts to continue the use of the major portion of the old plant. In fact, all of the 22 stalls of the old roundhouse and a large part of the approach

The engine terminal at Russell is an important adjunct to the large terminal yard at that point where coal from the New River, Kanawha, Logan and Big Sandy fields is classified and assembled into trains for movement over the Northern division and the Hocking Valley to Toledo and west over the Cincinnati division to and through Cincinnati. The coal traffic of the Chesapeake & Ohio has had a remarkable growth in recent years.



The Storehouse and Castings Platform

lead and the old auxiliary facilities are retained in service, while the layout of the new roundhouse and its approaches are such as to afford adequate space for a full circle development of the new house. Furthermore, the two houses are sufficiently close together to insure effective operation and thorough supervision of the two as one unit. In carrying out this arrangement the railroad enjoyed the advantages of adequate unoccupied ground adjacent to the old terminal and because of this found it possible to carry on the construction of the new terminal with a minimum of interference with the old during the construction period.

It more than doubled in the four years from 1921 to 1925, while the increase in 1925 over 1924 was about 25 per cent. Moreover, the largest part of this increase has been the movement of coal to the west and north, a condition which has taxed the capacity of the line and terminal facilities for west and northbound movement. Thus, in 1925, the coal movement, together with that of return empties and other traffic, involved, oftentimes, the arrival and departure of 150 trains at Russell yard, daily. As many as 6,500 cars now pass through this yard daily. To handle this traffic it is necessary for the engine terminal to dispatch from 90 to 115

engines daily, of which 35 are normally employed in yard service.

Increased Traffic Demanded

Enlargement of Facilities

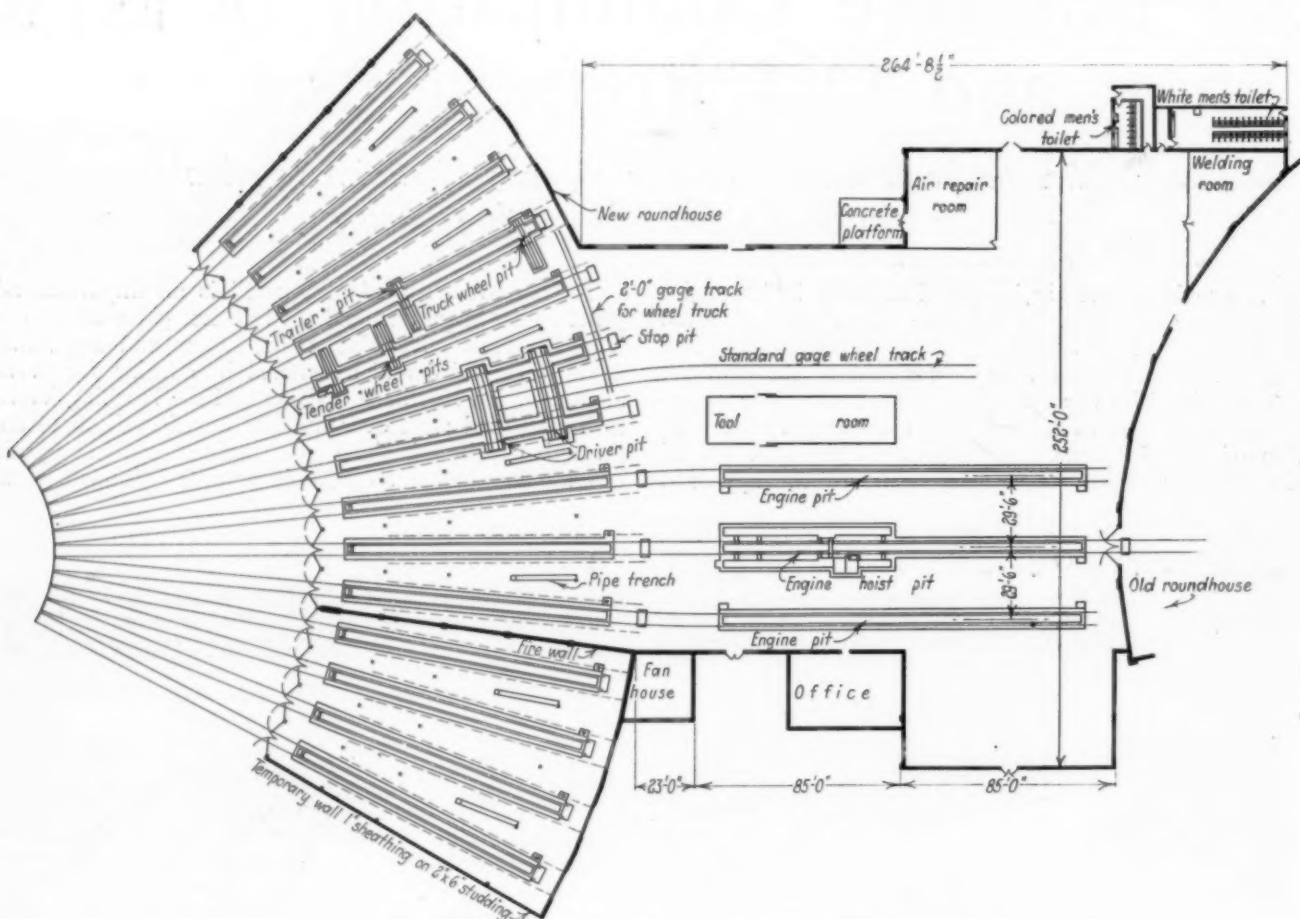
The expeditious handling of this growing traffic led to an extensive enlargement of the yard during the past two years so that it now contains about 85 miles of track. Other improvements include the provision for four main tracks through Ashland, Ky., which is located four miles east of Russell, and the construction of a third track between Ashland and Russell. In addition, authority was given in the early part of 1925 to carry out an extensive enlargement of the engine terminal facilities.

The old roundhouse at Russell has seven 70-ft., two

full circle house. The 115-ft. table is equipped with a dead engine haulage. The present project provided for the construction of 14 stalls served by the new turntable, these stalls being placed on the side of the new turntable toward the old house with one track connecting the two tables through the roundhouse and machine shop. The space between the new and old houses was utilized for the construction of shop facilities to serve both houses.

New Roundhouse Is Served by an Independent Approach Layout

The new roundhouse was provided with a complete independent approach layout lying north of and parallel to the approach to the old house. This new approach is provided with a coaling station of 1,000 tons storage



Floor Plan of New Roundhouses and Machine Shop

90-ft. and thirteen 115-ft. stalls. Three of the long stalls were normally occupied by dead engines while undergoing monthly repairs, inspection and boiler work, leaving only 10 stalls for handling the Mallet locomotives regularly used in road service. Boiler, blacksmith, pipe and carpenter work were handled in small sheds located close by. The roundhouse was reached by an approach layout served by a mechanical coaling station of frame construction, three single-track cinder conveyors, one double-track cinder conveyor and four work pits, together with a frame shed used as an engine supply house.

The new roundhouse is served by a 115-ft. Bethlehem twin-span turntable, the center of which is about 700 ft. north of the center of the old turntable in a position allowing ample space for the ultimate development of a

capacity, with duplicate hoisting units, serving four tracks, and a 250-ton elevated wet sand storage bin with track hopper and mechanical hoist. The sand driers are located under this bin and dry sand storage is provided in the coaling station. The coaling station and sand bins are of reinforced concrete and were built by the Ogle Construction Company of Chicago. Two single-track Chillingworth cinder handling plants with 40 cu. ft. buckets and one double-track cinder plant of the same make with an 80 cu. ft. bucket, two engine washing platforms, four water columns and an engine supply house with a small ice house adjacent are also provided.

Other new facilities include a storehouse and material platform, a power house, boiler washing plant, two inspection pits on the inbound tracks near the engine

supply house and an inspector's office with pneumatic tube system to the roundhouse foreman's office. The inspector's office is a temporary building and the plans contemplate the future extension of the engine supply house for locker room and inspector's office, which are to be connected to the inspection pits by underground tunnel. The plan was also prepared having in mind the covering of the inspection pits at some future date.

A 100,000-gal. steel water tank, which interfered with the construction of the shop building, was moved to a new location near the new enginehouse approach tracks. The old storehouse will be converted into terminal offices. The entire layout was designed to allow ample distance between successive facilities. A preliminary study was made for the ultimate development of this terminal and all facilities are located with a view to the eventual completion of this plan.

To insure the effective co-ordination of the new and old facilities and a maximum flexibility of operation a double-track connection was provided between the approach to the new house and that to the old house, which

asphalt built-up roofing and laid on 1¾-in. T. & G. sheathing. The framing of the roundhouse is of somewhat unusual construction. It was desired to use a monitor of the depressed or butterfly type, which experience indicates has given good ventilation and light. In order to provide sufficient working space around the rear drivers of Mallet engines, it was necessary to omit the columns near the center of the stalls, thereby introducing spans 52 ft. long in the roof framing. As structural steel could not be considered, heavy timber trusses were adopted. In addition to this, long span trusses had to be used where columns were omitted over the drop pits.

The outer wall of the roundhouse is omitted behind stalls 5 to 10, inclusive, so that the portion of the roundhouse occupied by these stalls opens into the new machine shop located immediately behind it. In fact, the tracks in stalls 8, 9 and 10 are continued into the shop building and track 9 continues through the old roundhouse to a connection with the old turntable.

The round house pits are 108 ft. long and follow



The Interior of the Machine Shop as the Equipment was Being Placed in Position

makes it possible for an engine to enter or leave the old roundhouse via the new approach. This arrangement made it possible to release about two-thirds of the trackage of the old approach, but this was carried out in such a manner that none of the old service facilities, except two of the cinder pits, one inspection pit, the old coaling station and engine supply house, was removed. Consequently engines using the old approach are afforded all of the usual service facilities except coal and sand supply and the engine supply house. In addition, the approach to the old roundhouse was improved by the addition of an engine washing platform of the same design as the two provided on the new approach.

Details of Roundhouse Construction

The roundhouse is of timber frame construction with brick walls, except the west end wall which is of temporary wood construction and will be removed whenever additional stalls are built. The door posts in the inner circle are of wood. The windows in the monitor have wooden sash glazed with ¼-in. rough wire glass and the windows in the rear wall have steel sash glazed with ⅛-in. Factrolite glass. All stalls are 130 ft. long. The roof of the roundhouse is covered with five-ply

usual construction. The rails are equipped with tie plates which rest directly on the top of the pit walls, to which they are attached by means of imbedded U-bolts and clip washers. Insurance against the overrunning of engines in the stalls is afforded by stop pits at the outer end of the tracks, these pits consisting of rectangular openings in the floor 5½ ft. wide by 3 ft. long and 13¼ in. deep, covered with planking. Additional safety is provided by cast steel rail stops bolted to each rail. On the three tracks which are continued into the shop building these pits are provided with short rails which may be inserted to bridge these pits when locomotives are to be run into the shop.

Unusually Complete Complement of Drop Pits

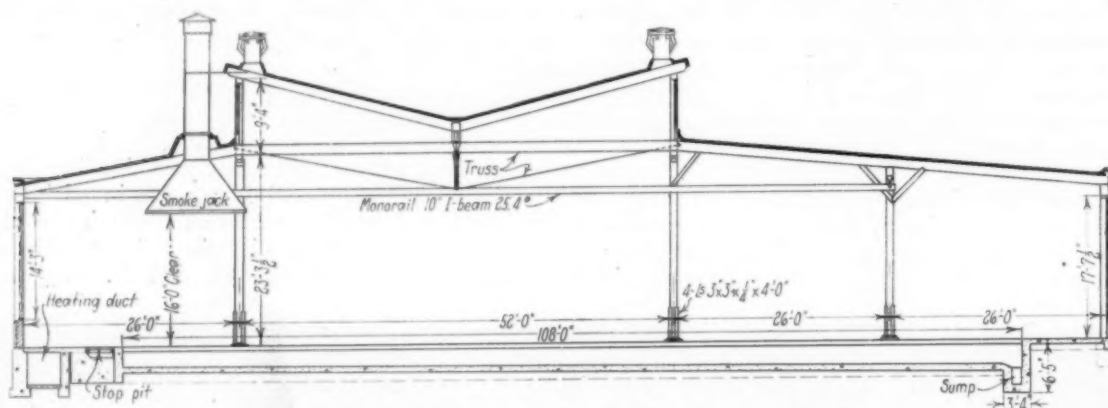
The roundhouse is provided with an unusually complete set of drop pits. These include a trailer wheel and engine truck wheel pit in engine pit 4, two tender wheel pits in engine pit 5, and two driver wheel pits which serve both engine pits 6 and 7. A wheel track between these two engine pits and extending into the shop building facilitates the rolling of driver wheels directly into the shop. Tender, trailer and engine truck wheels are delivered to this track on a wheel truck track of two-foot gage extending along the rear of stalls 4,

5 and 6. The driver wheel drop pits are equipped with Whiting drop tables, the other pits have wheel jacks. One track has two sets of depressed rail sections with removable cast steel fillers to permit lowering of the wheels a few inches for work on springs.

Another convenient utility for the handling of locomotive parts, such as side rods, is a system of monorail hoists placed on each side of the pits at a height of 18 ft. above the floor. These monorails are composed of 10 in.

The Shop Building Occupies the Space Between the Two Roundhouses

The shop building is a structure of irregular shape lying between the rear walls of the old and the new roundhouses, the main portion of which consists of two bays 85 ft. wide and 38 ft. clear under the roof trusses. One of these bays is 212 ft. long and the other 164 ft. long. The 212-ft. bay is served by a 15-ton overhead



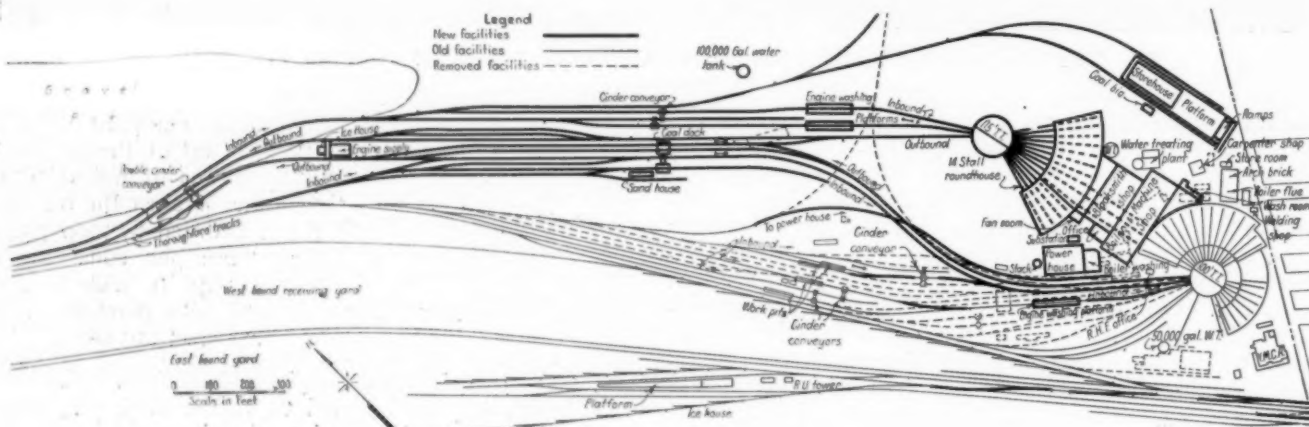
Longitudinal Section of a Typical Stall in the Roundhouse

I-beams suspended from the roof frame. Smoke jacks of both Johns-Manville asbestos and Paul Dickinson cast iron types have been installed.

Service pipes in the roundhouse include 6-in. mains for blow-off, washout and boiler-filling lines, a 4-in. compressed air line and a 6-in. steam line, a 5-in. high pressure water line and a 4-in. compressed air (blower) supply. These are carried overhead. Service drops from these mains are run to outlets on the columns at all stalls for the blower and compressed air service and at every alternate column for cold water. Branches from the blow-off, boiler filling, steam and washout

traveling crane and the 164-ft. bay has a runway for a 15-ton crane. The remaining portion of the structure comprises the odd-shaped areas adjacent to the new and old houses. The larger part of the building is used as a boiler and machine shop, one corner being reserved for a blacksmith shop and another for a welding shop, while one area 40 ft. square is partitioned off as an air repair shop, and another area 20 ft. by 77 ft., as a tool room, is enclosed by wire partitions 10 ft. high with wire ceiling. A fan room, office and toilet facilities occupy additions on each side.

The two 85-ft. bays are served by three transverse



Track Layout for the Engine Terminal Facilities at Russell, Ky.

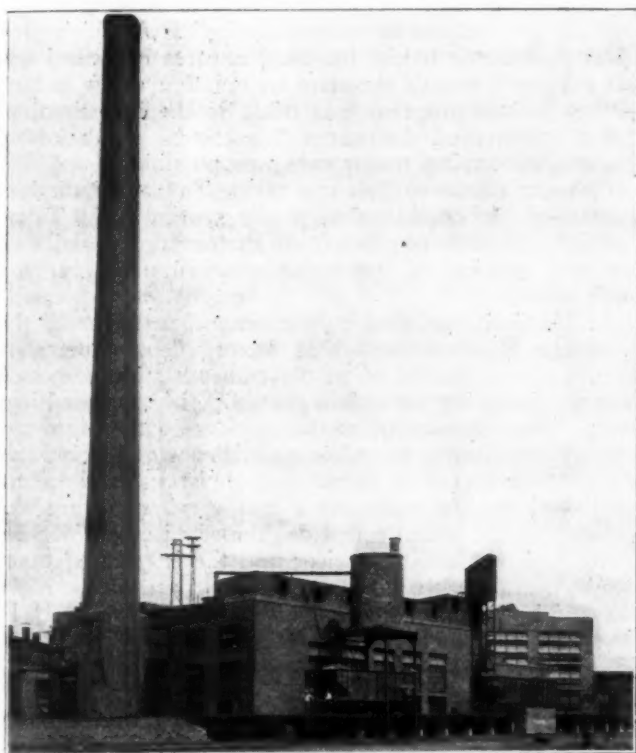
mains are carried down alternate columns to pipe trenches in the floor, having pits at one end in which hose connections are installed. Both pits and trenches are provided with cast iron covers.

The house is lighted by an effective distribution of 300-watt and 200-watt lamps with Benjamin Electric Company's angle reflectors attached to the posts between stalls. The turntable and surrounding area is lighted by 200-watt flood lights placed on the roof of the roundhouse directly over the doors.

tracks spaced 29½ ft. center to center, equipped with engine pits for nearly their full length, except that a large part of the middle track is occupied by a Whiting engine hoist of 300-ton capacity with six jacks and motor operated drum for hauling dead engines. All three of these tracks are continuous with the stall tracks in the new roundhouse, as previously mentioned, while the middle track is also continuous with one stall track in the old house. The shop is well equipped with machine tools and has space for additional equipment.

The building has a steel frame and brick walls. The roof trusses provide double sawteeth over each 85-ft. bay and one over the center line of the intermediate columns. The roof is of cement tile and the windows in the walls and sawtooth lights have steel sash. The windows in the monitor and walls of the machine shop have a large proportion of ventilating, operated by electric motors controlled from the floor by push buttons. The artificial lighting consists of three 500-watt Mazda "C" lamps in the Maxalite R.L.M. standard dome reflectors attached to the bottom of each truss with 200-watt lamps equipped with Benjamin angle reflectors on the side walls and 200-watt lamps with dome reflectors in the area adjacent to the roundhouses.

The power house is a steel frame structure with brick walls and concrete tile roof 80 ft. by 110 ft. in plan. The power house sash is of steel and the "A" frame



The Power House is of Brick and Steel Construction

monitor provides good natural light in the boiler room, as well as in the engine room. The boiler room contains four Babcock & Wilcox Stirling type boilers of 196-hp., equipped with Detroit automatic stokers. It also contains two Worthington boiler feed pumps and one Worthington fire pump having a capacity of 1,000 gal. per minute. The engine room is equipped with a 10-ton traveling crane, and also contains a 125-kva. General Electric generator driven by a compound Bullock engine, one Laidlow-Dunn-Gordon two-stage steam driven air compressor, one Ingersoll-Rand electric driven air compressor of 880 cu. ft. capacity, and one Chicago-Pneumatic electric driven air compressor of 2,000 cu. ft. capacity. Considerable space is provided for the addition of other units.

The cement tile roofs of the machine shop, power house and storehouse are covered with five-ply asphalt built-up roofing, applied by the Philip Carey Company, Cincinnati, Ohio. The floor in the machine shop is three-inch creosoted wooden block laid on five-inch concrete base reinforced with wire mesh. The floors in the

other buildings are five-inch concrete reinforced with wire mesh with one-inch cement mortar finish.

Mechanical Equipment for Handling Coal is Unique

The distinctive equipment in the power house is that provided for the mechanical handling of coal received in a track hopper under an elevated track. This was furnished by the Ogle Construction Company, and follows the general design of that company's equipment for coaling stations. It consists of a measuring feeder in the track hopper which delivers coal to the crusher, from which it is discharged into a ½-ton elevating bucket of a steel frame elevating tower to the roof of the building. From there it is discharged into concrete lined, steel frame bunkers by means of a belt conveyor with movable tripper and then passed through spouts to the stokers. Ashes are transmitted by a steam jet conveyor to a 25-ton steel storage tank over the coal track for loading the cinders into cars. The boiler washing plant occupies a wing at one side of the power house and is of the same type of construction as the power house.

Among the more modern facilities provided in this project are the three engine washing platforms of which two are in the approach lead to the new enginehouse and one was installed in the approach to the old roundhouse. Each of these washing platforms consists of a concrete floor slab 20 ft. wide by 125 ft. long surrounded by a 12-in. curb on all sides. The track support consists of a rib 18 in. wide directly under each rail to support the track ties clear of the floor. These ribs are 7 in. thicker than the slab and project 5 in. below and 2 in. above the slab. The slab is sloped from each end toward a transverse gutter in the middle which in turn is pitched to a sump at one side. These platforms are served by a D. & M. cleaning machine.

Unusually complete engine supply facilities are provided in the supply house 52 ft. by 32 ft., located near the outer end of the new approach lead. It is a one-story structure with basement, with reinforced concrete frame, floors and roof, and brick walls. The basement is equipped with two 5,000-gal. rectangular tanks for oil and space for added tankage is available, while the room above ground is equipped with racks and tables for tool boxes, oil cans, tallow pans, tools, etc., as well as delivery pumps for oil from the basement tanks. Separated from this building by a concrete platform 10 ft. wide which also extends part way along one side, is an ice house 22 ft. square of similar construction, lined with a four-inch thickness of cork block insulation set in asphalt cement. The original plan was to heat the engine supply house by steam pipes carried from the power house, but on account of the remote location a portion of the basement has been utilized for a separate heating plant for the entire building.

Storehouse Facilities

Storage facilities are provided in a building 150 ft. by 60 ft. bounded on both sides and one end by a service platform 10 ft. and on the other end by a storage platform 140 ft. long by 80 ft. wide. This building has steel roof trusses supporting a cement tile roof and carried on brick bearing walls, which in turn are supported on reinforced concrete beams spanning between foundation columns. This type of foundation was adopted due to the fact that the area occupied by this building is on filled ground. The floor of the house and platforms is of concrete. With the exception of an office 31 ft. by 25 ft., toilet facilities and an oil room at one end 20 ft. wide, the storage space comprises a large room equipped with material racks in tiers on

each side of the center aisle. The oil room is equipped with the usual facilities for handling oil, including four 500-gal. tanks and four oil service pumps connected with large oil storage tanks in the basement.

The roundhouse, machine shop and storehouse are heated by low pressure steam from the power house, using the hot blast system. The heating apparatus from the roundhouse is located in the fan room and the hot air is carried through underground ducts to the pits and outlets on the rear walls. The machine shop and storehouse are heated by unit heaters.

The engine terminal was built at a total cost of about \$1,200,000, including not only the facilities described above, but 100,000 cu. yd. of grading and five miles of tracks in the leads and service tracks, power transmission lines, yard piping, sewer lines and the remodeling of the old water station. The grading was done by Haley, Chisholm & Morris, Charlottesville, Va., while the buildings of the terminal, with the exception of the coaling station, were built by Joseph E. Nelson & Sons, Chicago. The construction of the building had to be carried out under a program which provided for the building of the new power plant and boiler washing plant before the new shop building could be erected because this structure covered ground which was occupied by the facilities which they replaced.

The layout and design of the new engine terminal facilities, approved by W. J. Harahan, president, and G. B. Wall, vice-president, were based upon the requirements and suggestions of J. W. Small, chief mechanical officer, and E. L. Bock, general superintendent. The design and construction were under the general direction of C. W. Johns, chief engineer. The design was under the immediate supervision of A. C. Copland, office engineer, and the construction under the direction of L. T. Nuckols, district engineer, of Ashland, Ky. The work is now practically complete and in operation.

Motor Transport Hearing at Dallas

TESTIMONY presented at Dallas, Tex., on September 20 to 22, at the Interstate Commerce Commission investigation into the operation of motor buses and motor trucks, dealt mostly with the decrease in the number of passengers carried by railroads and a corresponding decrease in revenue, due to motor bus competition. During the last three years railroads have keenly felt the bus competition, according to L. B. Sandoloski, assistant general passenger agent of the Texas & Pacific. His summary of the buses operating in competition with Texas railroads showed that several lines had 100 per cent competition, while others ranged from 40 to 75 per cent. He advocated the taxation of common carriers that handle freight or passengers in the same manner as railroad common carriers are taxed, saying that motor buses do not have a fixed charge for passenger fares and do not publish tariffs. To overcome the lower-fare phase of bus competition, he said, railroads are running excursions on every pretext. He felt that business taken away by bus competition can be recovered by the regulation of the bus lines, because they would be put on equal competition with the railroads and many could not operate under conditions imposed upon railroads. He argued that buses should be required to operate in bad weather as well as good weather and should provide personal sanitation for passengers.

Iven Lee, assistant general passenger agent of the Southern Pacific, testified that in excess of 20 per cent of the short-haul passenger business of the railroads has been lost because of bus competition. Between 1920 and 1926, the motor car registration in Texas increased approximately 119 per cent. The number of intrastate passengers carried by the Southern Pacific decreased 578,000 between 1920 and 1926, while the average number of miles of passenger was carried showed a big increase. In 1923, the Southern Pacific carried more than 33,000 passengers between San Antonio, Tex., and Seguin. In 1925, the number decreased to a little more than 9,000. In 1923, between two other Texas points 106,947 passengers were carried, while in 1925, the number had decreased to 26,227.

During the hearing it developed that a little more than a year ago, under a ruling from the attorney general's office, the Texas Railroad Commission investigated motor transportation in Texas, with a view to making operative the old "express common carrier" law, which provides that motor trucks handling express be placed under the regulation of the state commission. Due to lack of funds little progress was made in the investigation, but it was proved that under this law no regulation of passenger carrying motor cars was possible.

Clarence Gilmore, chairman of the Texas commission, expressed the opinion that public sentiment in Texas favored adequate regulation of motor trucks and that the next session of the legislature will probably pass such laws.

L. H. Cecil, assistant to the general manager of the Southern Pacific, stated that factors demanding governmental regulation of motor transportation are such that the following provisions should be incorporated into law: The operation of motor carriers on the highways only on certificates of public convenience and necessity; the examination of all operators for physical and mental qualifications; the same rates and services as are demanded of the steam railroads; the requirement of adequate and continuous service; and the levying of taxes commensurate with the motor vehicles' use of the highways. The extent of the competition was shown by H. E. Everhart, assistant general freight agent of the Gulf, Colorado & Santa Fe, who testified that there are 197 companies operating trucks in Santa Fe territory and 451 trucks are being used. From 1920 to 1925, the number of tons of freight hauled by rail over short distances decreased 67,264 tons or 35 per cent.

The general opinion of bus operators favored reasonable regulation of the industry by state laws but not by federal regulation. The principal argument in favor of motor bus operation by individual companies was that the motor transport fills the definite need of Texas because of the many towns in the state which are remote from railroads. Testimony was presented to show that milk companies have been forced into the trucking business to move milk to the consumer because of the lower cost. Trips of 500 miles daily are made in territory around Dallas and move 40,000 tons of milk every day. Transportation takes up 60 per cent of the cost of milk production and if motor transportation should be eliminated the price of milk would be increased two cents a quart and the amount available would be cut in half. At present the railroads handle approximately 2½ per cent of the milk brought to Dallas and in years past have handled as high as 20 per cent. The general argument of adversaries of bus transportation was to the effect that buses and trucks can run on more frequent schedules and can make door to door deliveries.

The hearing adjourned on September 22 to convene at Kansas City, Mo., on September 24.

Modern Shop Equipment as a Factor in Increased Production*

*More care in the selection of machine tools necessary—
Depreciation rates should be revised*

By M. A. Hall

Superintendent of Machinery, Kansas City Southern, Pittsburg, Kan.

PRODUCTION may be defined as any tangible result of industrial, artistic or literary labor. In the category of railway mechanical departments, it is not sufficient to consider production as the mere manufacture of a link block or a car sill. We generally think of production in terms of locomotives and cars turned out of shop and yet in the universal effort to increase production, we must reflect the subject in a larger sense, in such a way that the tangible result of augmenting production will be not only numbers of cars and locomotives turned out but lowering of car and locomotive costs per mile, increasing locomotive miles and other accurate gages of mechanical department performance.

The phrase "modern shop equipment" can be construed to mean all sorts of equipment which is placed in shops without considering the buildings themselves. We can roughly class this equipment as machines and tools; in using the word machines, we mean all varieties. A manufacturing or industrial plant is as efficient as its machine equipment, good workmen cannot make obsolete machines produce with the rapidity of new ones. Machine equipment is the basis and most important factor in any industrial plant. An old plant with modern machines will produce more than a new plant with old machines. Average mechanics with good machines will put more finished work on the floor than the best of mechanics using aged and decrepit machines. Thus a brief analysis shows that the subject of machine and shop equipment should have first consideration whereas, practice shows us that the last consideration after men, building, etc., is given to machines and tools.

Reasons for Securing New Machine Tools

Unfortunately, but largely true, shops are constructed and equipped at approximately the same time, being designed to handle present demands and the expected added demand of 15 or 20 years in the future. In the meantime, machines and tools wear out and new ones are purchased to replace the worn out ones. This seems to be the first reason for procuring a new machine. Then we get certain classes of locomotives or cars which require special machines and they are added as a matter of necessity. Following this same line of reasoning, modern rolling stock often has parts of sizes too large to machine on the old ones and another piece-meal purchase is made. Occasionally an old machine is retired because of its generally dangerous character and a new machine which assures the safety and health of the operator is secured.

Perhaps lastly, then, production is given a hearing and someone wakes up to the fact that through the addition of a certain machine, the work of a particular branch of

the shop will be greatly expedited. And then, after many careful explanations to the management that although the old machine will do the work, a new one would be vastly superior from a production standpoint, a machine may be secured. No other industry will tolerate or expect to survive obsolescence as much as a railroad.

Proper shop design and correct placing of machines for convenience and production can be easily nullified by the purchase of a machine or tool unfitted for its place in the shop. Selection of items of shop equipment should come after a careful and unhurried analysis of shop conditions.

Each repair point has its own peculiar conditions and should receive an entirely separate analysis and consideration. It is no more right to adopt a certain size planer to install in all shops than it is to apply eight-feed lubricators to all locomotives or to put 6-in. by 11-in. axles under all freight cars. The true needs must be ascertained and in this it is of utmost importance that system officers consult with local officers when ordering new shop equipment.

There is no standard method of selecting machines. One large railroad asks its master mechanics and shop superintendents to make known their wants without specifying any certain make of machine. Then the shop engineer will analyze the situation, secure bids on machines which will answer the specification and then again ask the local officers for their choice. However, the final selection lies with the shop engineer.

On the Kansas City Southern the method of selecting new machines is one which has worked successfully. In the first place a general committee composed of the mechanical engineer, master mechanics, shop superintendent, master car builder, with the superintendent of machinery ex-officio, will consider all repair points and set up a tentative schedule for the purchase of new machines and the re-arrangement or disposition of old ones.

Then for each particular point, special studies are made to determine what abilities and characteristics the new machines must have. Following this, the manufacturers of approximately the type of machines desired are asked to send adequate descriptive literature together with their bids. The final selection is then made. The recommendations and selections of the committee are then submitted to our consulting engineer for approval.

By this method of selection, it is practically assured that no machine will be purchased which will not prove its worth, as the local officer on the committee knows intimately the needs of his point. The work of this committee is of such importance that no expense is spared in sending members to various outside shops to observe certain machines in actual operation. In addition, delegates are sent to the Mechanical Division and other con-

* Abstract of an address delivered at the convention of the International Railway General Foremen's Association, held at Chicago, September 7 to 10, 1926.

ventions and are required to make a careful study of machine and equipment exhibits.

Careful selection of machines is necessary for economical shop operation and thorough analyses of shop conditions will prevent the often witnessed misfit machine. L. F. Loree, in his book "Railroad Freight Transportation" says: "More careful consideration should be given to the selection of machine tools, and the work should be carefully checked over to determine whether or not it is in sufficient volume to keep busy a highly specialized modern tool. Care should be taken to see that the productivity of the machine is insured by a proper supply of jigs and fixtures. In designing new shops, the same care should be taken to secure the advice of interested officers as in designing a new yard."

New Machines Should Fit the Conditions

The primary points of consideration in the purchase of any new machine or tool are the initial cost, the time the machine will be utilized and whether the savings will offset the cost and added interest on the investment. The breakage beyond repair of a certain machine often necessitates the purchase of a new machine wherein neither the time utilized nor the resulting savings justify the purchase. For instance, a broken bed, though many times repaired, made it imperative for us to get a new coach and truck wheel lathe. The new machine cost about \$16,000 and turns out a pair of wheels in 35 minutes, where the old machine struggled to do it in an hour and a half. But when we know that in a 12 month period, only 79 pairs of wheels were machined, the savings will not half cover the interest on the investment. We all have our examples where absolute justification cannot be secured from a monetary or production standpoint.

In another shop a great clamor arose for a grinder for air pump cylinders. The machine was finally purchased and did the work far better and quicker than a boring mill but later it was discovered that only six cylinders were ground in a period of five months, during which over 50 pumps were overhauled. Is this a wise purchase?

Perhaps the great handicap towards not getting machines which will fit into the shop is the tendency to get a machine for the present only, with little thought given the future and even less thought given as to how the new machine will fit into the industrial scheme of increasing the shop output. In other words, there's hardly a railroad shop in the country which bears the stamp of progress made by the industrial or planning engineer.

Back of all installations of new machines and the rehabilitation of shops is the all important cost factor. In the ultimate cost of the machine, to the purchase price must be added freight, cost of putting in foundation, cost of connecting up with the source of power and, last but not least, the charge that must be absorbed on account of the book value of the old machine being replaced.

Building a Depreciation Reserve

The Interstate Commerce Commission requires the accrual of a depreciation reserve on rolling stock but makes it optional with the carrier on road property. Most railroads refrain from charging off depreciation on road property. However, when a machine or item of shop equipment is to be replaced, the depreciated value of the machine must be set up. There is no standard information for arriving at this depreciated value.

As mechanical department men, we are interested in maintenance accounts and when the value of an old machine must be charged to maintenance, there is a possi-

bility of assuming a heavy maintenance charge. On several railroads, the depreciated value of a machine after 20 years of service is 50 per cent of the cost of the new machine. Thus a lathe costing \$2,000 twenty years ago would still be carried at \$1,000. It seems as though there should be a more rapid rate of depreciating values. One good suggestion offered by the superintendent of motive power of one of our western roads is to charge 10 per cent per year depreciation on production tools and 5 per cent for non-production tools such as engine-house tools.

In these days when machines are being forced to the limit and often loaded beyond the limit, it seems unreasonable to expect a machine to hold its own in shop output over a period of 20 to 30 years. There should be more thought given to the retirement of machines upon reaching obsolescence and mechanical department maintenance charges could possibly be lowered by an increase in the rate of depreciated values on machines and tools.

Knowing that we pay whether in a lump sum at the end or from the accruals of depreciation reserves, what difference does it make? Only this: it is not difficult to build up a depreciation reserve month by month and this would allow the purchase of a machine when most needed during a period of financial stringency. Isn't there a lesson and example in our Christmas Savings?

Maintenance and Care of Machines and Tools

It is often said that modern machine tools are so intricately made that they cannot stand the rough usage of the older machines. However, modern machines are more rugged than their predecessors in basic design and if they occasion trouble it is because of the lack of care and attention given the devices which make modern machines as modern and marvelous as they are. After a new machine represents an investment of perhaps thousands of dollars, is properly set up, adequate instruction should be given in the use of the machine. Practically no two machines have feeds, speed gears, screw cutting arrangements or taper attachments alike and a green operator can work havoc with a new machine in but a short time. It is almost too much to expect that an ordinary machinist should be able to go right ahead on a new machine, especially on such machines as grinders, boring bars, milling machines, etc.

We are all familiar with the valuable service given the mechanical department by railroad supply companies which furnish us stokers, feed water heaters, injectors, lubricators and many other things. Their representatives are constantly on the job, make regular calls and are not too far distant to answer a distress signal. Their assistance is most helpful to mechanical departments, and in the majority of cases, individual installations do not represent in equal value the cost of a single machine.

Although some of the tool manufacturers have service men in the field, the industry may be justly criticized for not periodically servicing their products. In many instances it is only the insistence of the superintendent of motive power which brings the service men. The railroads would appreciate more co-operation on the part of the manufacturers and the help of service men would not only be of distinct benefit to the railroads but would be a boon to the tool producers.

Concrete Results of Modern Shop Equipment

We are all familiar with the pride and satisfaction that comes from installing a new machine in a shop. We know of increased production and it may not be amiss to hear what has been accomplished in our Pittsburg shop. A new wheel lathe turns out seven pairs of wheels in

eight hours when an old machine tore itself up getting out four pair in the same time. Coach and truck wheels formerly required $1\frac{1}{2}$ hours per pair while our new machine turns them out constantly in 35 minutes per pair.

On one of our old bolt lathes we were fortunate to get 30 fitted bolts in eight hours. Now on a new machine we average 65 bolts a day. On an old bolt lathe the average production was 10 rod strap bolts in eight hours, now we rarely get less than 20 from a new portable lathe.

As for hand production, it required three men working eight hours each to flange an OG type flue sheet. A flanger requiring but two operators now flanges the sheet in three hours.

It might be interesting to know that on our road where we have but one classified locomotive repair shop, two freight car classified repair shops and but nine engine-houses and running repair points, we have expended in the last five years a total of \$318,249 for new machines and tools alone, not even including power plant machinery. Our direct production is not only increased but the indirect effects of modernization have been far reaching.

Regarding locomotives, although our average tractive force for freight locomotives is 64,897 lb, our average tractive force for all locomotives, is 54,049 lb. which is the ninth highest average in the United States. Out of nine railroads whose locomotives have an average tractive force of 45,000 lb. or over, only three have maintenance cost per mile figures as low or comparable with those of the Kansas City Southern. On this road the cost per mile in 1923 was 36.6 cents, in 1924 30.9 cents and in 1925 was 29.8 cents. With such a saving in cost per mile the total savings have been large.

In addition to lowering maintenance costs per mile, the mileage per engine failure has been increasing steadily until in 1925 the figures show a 47 per cent increase over the next best record in the history of the company. In 1908 we had 1,431 engine failures, and, excepting the strike year of 1922, we have steadily decreased this until in 1925 we had but 212 failures on the entire system. So far this year we had but 91 failures, or an 83 per cent decrease in the number of failures.

With these records being made in the last five years it is not hard to discover the cause. Our supervision is practically the same and our mechanics are perhaps less experienced than those employed prior to 1922. The fact remains that the greatest factor has been in the carrying out of a program of providing better shops, engine houses, machines and tools.

The savings because of modern shop equipment can be measured in other ways than units of work turned out or cost per mile figures. There is a big human element to consider. Good machines keep operators more satisfied and tend to eliminate costly labor turnover. The men take more pride in the appearance of their machines and the shop in general and the neat appearance of a shop means a great deal. A distinct pride in their work is assumed by the mechanics and harmony in general is more prevalent. Is it any wonder that costs should be high in smoky shops and enginehouses, where the pits are usually knee deep with water and where the failure to provide good machines or mechanical devices exasperates the worker?

It is a distinct mental aberration to think that the constant purchase of new cars and locomotives will lower operating costs, and all of you who help guide the destinies of our railroads can materially assist matters in lowering maintenance costs by getting at the very root of the question—that of modernizing repair facilities. And then with repair facilities and shop equipment as

modern as cars and locomotives, we will be able to make shops more productive with a resulting lowering of unit costs. It is a hard fight to get tools and machines to modernize shops and the battle is not won until the management's faith in providing new equipment for the mechanical department has been justified by our using the new facilities to capacity in a determined effort to lower maintenance costs.

Train Operation Without Written Orders

THE Central of Georgia, as recently announced in the *Railway Age*, is preparing to equip a short section of road with an automatic block signal system sufficiently complete to justify the movement of trains wholly by signal indications, with the abolition of train orders, both Form 31 and Form 19, as well as of time-table right. Between Macon and Fort Valley, 29 miles, a line which carries a heavy traffic, the present improvements are to be made in order to increase the capacity of the 24 miles of single track.

The signals are to be placed under the control of operators by means of desk circuit controllers, interlocked. Operators will be located at Terra Cotta (west end of double track near Macon) and at Byron, 16 miles farther west.

The locations of the present automatic signals will not be changed except those adjacent to the passing tracks. At the entering end of a passing track a take-siding indicator (illuminated letter "S") will be added to the present signal. With this, the operator, when he wants an approaching train to head in, will put the arm of the signal at stop and display the illuminated "S." At the leaving end the present leaving signal will be moved to the fouling point and a signal installed on the siding.

The signal on the siding will be a three-light dwarf signal. When the passing track is occupied, this dwarf will normally show red. When the operator wants to direct this train to proceed he will display an illuminated letter "S" at the dwarf. This will be an indication to turn the switch; and when this is done, the dwarf will change from red to yellow, provided the road is clear. The yellow light will be the authority for the train to move out of the siding and approach next signal prepared to stop.

The signals being put under the control of an operator and their controlling levers interlocked so that opposing signals cannot be cleared at the same time, even if the track is unoccupied, the circuits for the signals adjacent to passing tracks are modified to give greater flexibility of movement. For example, at present when a west-bound train is pulling in at the east end of a passing track, the eastbound signal at the other end of this passing track is in the stop position; but under the proposed arrangement the eastbound train, holding the main line, may advance on a caution indication to the signal at the fouling point of the west end of the passing track. Thus closer meets can be made without stopping the train that holds the main line.

Power switch machines will be used at two switches, and the arrangement of signals is such that other switches can readily be equipped if later found advisable. The change in circuits includes adding safeguards against crosses and other features such as are used for interlocking signals.

With this arrangement an engineman will always proceed on a clear signal regardless of all other trains.

When necessary to take siding, he will receive a caution indication before approaching the switch where he is to head in, and at the switch he will receive a stop signal and an indication to take siding.

The arrangement of switches and signals to provide for the convenient movement of trains on single track without the use of written orders is to be established by the New York Central on a line about 40 miles long, putting the movement of trains on the whole of this section as completely in the hands of the man in the cabin as is the case in a large passenger terminal. Single-track arrangements of this kind and the terminal arrangement at such places as the Grand Central, New York City, are alike, in that the man who controls the levers is constantly giving proceed signals for trains where both the train and the signal are entirely out of his sight.

This section extends from Stanley, Ohio, on the Ohio Central Lines, about five miles from Toledo, southward to Berwick, Ohio. It is on the line from Toledo to Bucyrus and Thurston. A statement printed in the New York Central Lines Magazine for September, page 11, says that in this territory the man in control will operate 30 switches—the equivalent of 30 small interlocking plants, and interspersed with these are 31 automatic block signals with 31 block signals interspersed.

Car Inspectors' Association Votes to Change Its Name

ON the twenty-fifth anniversary of its founding, the Chief Interchange Car Inspectors' and Car Foremen's Association of America in convention at the Hotel Sherman, Chicago, September 21, 22 and 23, decided that the association can best serve its purpose and increase the scope of its work by a change of name to encourage and promote membership by car department supervisory officers of all ranks. It was accordingly voted that the Chief Interchange Car Inspectors' and Car Foremen's Association of America be known hereafter as the Railway Car Department Officers' Association.

One of the most important questions considered by the association was the reduction of transfers of loaded cars with defects not of such a nature as to militate against safe operation of the car in road service. There was a decided difference of opinion between members of the association regarding the advisability of the delivering line, in a case of this kind guaranteeing the receiving line against loss if subsequent transfer should prove unavoidable, but those present were practically unanimous in favor of the following resolutions which were presented as a solution to the whole transfer problem by C. J. Nelson, chief interchange inspector, Chicago.

Resolution

1. That selfish interest be avoided to the best advantage of the railroads as a whole, and their patrons, with the predominating policy of united efforts to forward all loaded cars to destination without transfer.
2. That the maximum efforts be made to maintain freight cars in sufficiently good condition to carry their loads to destination.
3. That efficient and systematic inspection of cars be required to prevent the loading of defective cars which may have to be repaired, or may require transfer of loads before reaching destination.
4. That every practical effort be made to have cars repaired under load, but in the event that repairs cannot be made under load, cars should be permitted to go forward, provided, of course, that they are safe to handle in road trains.
5. That loaded cars found with defects that render them unfit to carry loads to destination should not be offered in interchange, but should be repaired or transferred by the handling road with the under-

standing, however, that when once delivered they should not be returned.

6. That if a defective car is safe to carry its load to destination, the fact that it might be transferred before reaching destination on account of conflicting opinions that it might be necessary to place it on the repair track after it has been unloaded at destination, and perhaps wait for material ordered from the owner, or that it might be necessary to return it home empty, should not be taken into consideration in deciding whether or not the load should be transferred.
7. In the event that it becomes necessary to repair a car, or transfer its load before it reaches destination due to defects that apparently existed when the loaded car was previously received in interchange, the utmost care should be exercised in deciding whether or not the judgment of the men who allowed the car to go forward was at fault, in order to avoid unfair criticism which invariably has the detrimental effect of causing men to become unduly technical.

Election of Officers

The following officers were elected for 1927: President, B. F. Jamison, special traveling auditor, Southern, Meridian, Miss.; first vice-president, E. R. Campbell, chief interchange inspector, Minnesota Transfer, St. Paul, Minn.; second vice-president, M. E. Fitzgerald, general car inspector, Chicago & Eastern Illinois, Danville, Ill.; third vice-president, W. R. McMunn, general car inspector, New York Central, New York; A. S. Sternberg, master car-builder of the Belt Railroad of Chicago was re-elected secretary-treasurer.

Four new members were elected to the Executive committee: C. J. Nelson, chief interchange inspector, Chicago; M. P. Cole, general car inspector, Boston & Maine, Boston, Mass.; E. D. Colon, shop efficiency engineer, Pere Marquette, Detroit, Mich.; and H. J. Smith, general car inspector, Delaware, Lackawanna & Western, Scranton, Pa.

The Supplymen's Association also elected officers for 1927 as follows: President, J. C. Keene, the Bradford Corporation, Chicago; first vice-president, J. W. Fogg, McLean-Fogg Lock Nut Company, Chicago; second vice-president, J. T. Cralley, Union Metal Products Company, Chicago; third vice-president, C. F. Weil, American Brake Shoe & Foundry Company, Chicago; and fourth vice-president, E. H. Hall, Robert M. Lucas Company, St. Louis, Mo. B. S. Johnson, of W. H. Miner, Inc., Chicago, was re-elected secretary-treasurer. Three new members were elected to the Executive committee as follows: E. H. Weaver, Westinghouse Air Brake Company; Ralph Sheafe, Sheafe Engineering Company, Chicago; and F. E. Dodge, National Lead Company, Chicago.



Eastbound New Haven Express No. 10, Canton, Mass.
Canton Viaduct, Built About 1834.

Telegraph & Telephone Section

Annual meeting at Swampscott, Mass.—Large attendance

—Varied reports of progress

THE Telegraph and Telephone Section of the American Railway Association held its annual meeting at the New Ocean Hotel, Swampscott, Mass., on Tuesday, Wednesday and Thursday, September 21, 22 and 23, with the president of the Section, H. A. Shepard (N. Y., N. H. & H.) in the chair and an attendance of about 250, including guests. Secretary W. A. Fairbanks reported the number of memberships represented as 213; associate memberships, two. Railroad representatives present numbered 135; visitors 30, and ladies 90.

The first discussion was that on outside plant, reported on by Committee No. 1, E. C. Keenan (N. Y. C.), chairman. Subcommittee "A" of this committee reported on 22 different subjects, most of which were dealt with briefly, and the report was accepted as information. The principal discussion was on chemical treatment of poles. The committee submitted a specification for the butt treatment of chestnut poles, which, after brief discussion, was ordered to letter ballot for inclusion in the manual. The committee presented also an interesting four-page report on preservatives in which sodium fluoride is the basic toxic agent. These are desirable as being more cleanly than creosote.

Tests of treatment of poles already set, as carried out by the Western Union, near New York on the Erie Railroad were described in some detail by P. J. Howe. A part of a certain line of poles were charred and sprayed with hot creosote and a part left untouched. After three years all untreated poles showed decay, while in 90 per cent of those treated the beneficial effects were pronounced. In general, it may be said that this treatment will lengthen the useful life of poles three or four years. The treatment in this case preserved from borers as well as from decay. It is desirable to char and spray well below the ground line. Similar experiments were made on the Central of New Jersey.

Typical plans for tool, dining and sleeping cars for workmen were presented by this committee as information.

Subcommittees B, C, D, E and F, of Committee No. 1 presented reports on wire crossings, on underground construction (including a specification filling 86 pages, profusely illustrated, of conduit construction) and on transpositions; also an elaborate code, illustrated, of instructions covering outside plant construction methods.

Committee No. 2, construction and maintenance of inside plant, reporting through numerous subcommittees, presented a large number of specifications and revised specifications, profusely illustrated with diagrams, the whole filling 150 pages. The specifications for beeswax compound, for a double conductor plug, for double conductor cords, "A R A-2-A" and "A R A-3-A" and for friction-tape, were ordered, after brief discussions on each, to be sent to letter ballot for inclusion in the manual.

One of the principal discussions on this committee's work was that on location and layout, the report including a typical floor plan of the fixtures in a general or relay telegraph office. Railroad architects are calling for comprehensive information on this subject and the committee, having heard a large number of suggestions, was

called upon to expedite its work in completing the most comprehensive specification possible. The plan presented was accepted for reference to letter ballot, but with the understanding that it could be treated only as showing principles, not exact practice.

The outstanding events in the telegraph world during the past year, as related to railroad service, were covered by the reports of Committees 5 and 6. Abstracts of these reports follow:

Report of Committee No. 5

The report of committee No. 5, J. A. Jones, chairman, on communication development, deals with 15 subjects intended to cover the outstanding developments during the past year. Subject No. 1 is the fiftieth birthday of the telephone; and No. 2 deals with the voice-frequency carrier telegraph system for cables. This system, long in use on open wires, has been developed by the Bell Telephone System for use in long cables, such as that from New York to Chicago. In this system a four-wire telephone circuit is set aside for exclusive use of the carrier telegraph. The regular telephone terminal apparatus is removed and in its place there is substituted the voice-frequency carrier telegraph terminal apparatus. One of the transmission paths of the four-wire circuit is used to carry telegraph channels transmitting in one direction, while the other path carries channels transmitting in the other direction. A total of ten or more one-way telegraph channels is derived from each transmission path, the frequencies ranging from about 400 cycles to somewhat above 2,000 cycles. Each two-way telegraph circuit consists of two of the channels, one for transmission in one direction, the other for transmission in the opposite direction, which are combined and arranged for connection to the telegraph subscribers, or to other telegraph circuits, by means of the carrier telegraph terminating apparatus.

With these telegraph circuits, it is possible to send as fast as 40 dots a second.

The third subject tells of the use of loud speakers and microphones in large freight yards. One centrally-located amplifier is used to operate all the loud speakers.

Following are notes on the fourth and subsequent subjects:

4. Felt attached to the ceiling is being used to improve conditions in noisy telegraph offices. The felt is covered with a cream-colored finish which gives a good appearance and can be kept clean.

5. A trunk line railroad has improved the efficiency of the bridge quadruplex by changing coils, reducing resistances and other modifications.

6. The Western Union has adopted a patented sub-polechanger arrangement, improving the signaling and stabilizing the balances of quadruplex sets.

7. The Western Union has made a number of useful improvements in Wheatstone relays.

8. The Western Union has standardized its table for repeater equipment, the design being that reported by this committee in June, 1924. Tables are standardized in all details so that one can be quickly taken out and shipped to another city in an emergency.

9. The Western Union has adopted simplified unit

switchboards, making practicable a standard adopted to way stations having as many as ten circuits.

10. The Western Union has recently standardized a new type of lamp mounting for repeater tables and other uses.

11. This paragraph describes, with a diagram, a scheme by which the Western Union reduces the time and labor required to determine the resistance of a ground. A portable testing set employing this method has been developed.

12. The Western Union has standardized a new type of time wheel track for the Gill d.c. selectors. The new track consists of a glass rod with a rough surface, eliminating failures due to sticking of the time wheel. The telegraph company has patented this improvement.

13. One large railroad, by the use of an attachment fastened to a regular sounder, adjusts automatic sending machines without taking them away from the office. To operate this attachment the sending machine wedge

corders in telegraph circuits; it would not be worth the cost; and such records may even be untrue because signals which would reach the ear correctly may be unreadable on the tape.

The outstanding development under subject *b*, is the adoption by the Western Union of tape printers, which will ultimately replace page printers. With the tape there is an increase of 18 per cent in line capacity and a decrease of 75 per cent in the attention required to maintain the printer. The tape printer is well adapted for tabular matter. The Western Union also is developing the simplex printer, a direct keyboard-operated machine; applicable to any service now worked by Morse, with increased capacity, increased accuracy and requiring less training of operators. The simplex printers are set at a maximum of 65 words a minute, and 130 messages an hour have been sent for several hours in a day; and on circuits operated alternately for sending and receiving 50 messages an hour. Records for a month on commer-



Telegraph and Telephone Superintendents and Their Guests at Swampscott, Massachusetts.

is inserted in the circuit at the way station. The way station operator is requested to "dot" and to allow the machine to make as many dots as it will at one stroke. The attachment records the number of dots made and an observer with a stop watch records the time consumed. By simple mathematics the dots per second are then calculated and speed of sending machine properly adjusted.

14. This describes a fiber plug used in place of the expansion shield. It is claimed to be an improvement on any other anchorage device.

15. A well known battery company has placed on the market a primary battery of the copper oxide-zinc-caustic-soda type which has the convenience of a dry battery. It is a glass jar which, when supplied with the requisite amount of water is ready for use, and when exhausted, all of the elements, including the jar are discarded. The jar is 9 in. high and less than 3 in. in diameter.

Report of Committee No. 6

Committee No. 6, G. D. Hood (C. R. I. & P.), chairman, reported on the question of placing recorders on Morse circuits as a means of definitely fixing responsibility for errors; (b) on use of automatic printers; (c) on the establishment of emergency detour routes for telegraph and telephone service; (d) on the use of loud speakers in yard and terminal territory; (e) on the revision of a form used by the Pullman Company in reporting unsold space; (f) on a standard form for the make-up of received telegrams and a routine for the handling of telegrams.

The committee does not recommend the placing of re-

cial telegraph circuits showed the following average number of messages per operator hour:

Simplex	43
Telephone	32
Morse	24

The simplex operator has a printed record directly in front of him which greatly reduces the number of errors.

This committee reported on the use of the printing telegraph in a large yard of the Illinois Central as described recently in the *Railway Age*. The Indiana Harbor Belt has made a similar installation and the Illinois Central has a circuit at Chicago with four offices. The New York Central is also using a printer circuit at New York and the Pennsylvania has one in Philadelphia.

The committee does not propose any general rule for detour routes.

The committee proposes a standard form for the make-up of received telegrams which calls for information in the following order:

- (1) The call of the sending office.
- (2) The number of the message.
- (3) The personal sign of the receiving operator.
- (4) Classification ("X" preferred message, "N" night message).
- (5) Place from.
- (6) Time filed in the telegraph office.
- (7) Date.

All of the foregoing on the first line; name of addressee on the second line; destination on the third line. Time received on line following signature. Such signals as "fm," "to," "ahr," etc., are not to be transmitted. A message bearing neither X nor N is a day message. Ditto marks must not be used to duplicate destinations.

The committee finds that practice with loud speakers

on telephone lines has been greatly improved by the development of the current supply system and by improving the acoustic qualities of rooms by the use of felt on the walls.

Printing Telegraphs

The reading of the paper on the use of printing telegraphs on railroads, by J. O. Carr, was the principal business of the afternoon of the second day of the meeting. This paper was abstracted in the *Railway Age* of September 25, page 567.

In the discussion, E. R. Shute, Western Union engineer, told what extensive use is made of printers on Western Union lines, thousands of them. He believes several hundred railroad circuits now worked by Morse could be profitably changed to printing lines. He advised changes to increase the capacity of certain lines mentioned by Mr. Carr, and described several mechanical improvements now under way. Where printers, either

speed circuit breakers and relays for power circuits; and on reduction of voltage ripples in generators. The committee reported data which was accepted as information. A statement of measures recommended in situations where joint use of pole lines with higher voltage circuits is necessary, was accepted and ordered to be sent to letter ballot for approval and inclusion in the manual.

Education and training of employees was the subject of a report by committee No. 10, the main portion of which was an account of a mental test which is in use by the Western Union Telegraph Company in the selection of employees. A large percentage of the new employees engaged by the Western Union are for training as printing telegraph operators and these tests, which were first tried on employees whose qualifications were known, have been successful in raising the grade of persons admitted for this service. Where the test is strictly followed, the employing officer cannot allow his



September 21, 1926—Annual Meeting of the T. & T. Section of the American Railway Association

page or tape, are not equal to demand for duplicating the gelatine process (Hektograph) is extensively used, with marked satisfaction. Such copies are more satisfactory than carbons. The speaker favored tape printers over page printers for all classes of service. The work of gumming the tapes on blanks always keeps up with the sender. L. Behner (Pennsylvania) told of the experience of his road with printers since 1912, when it began with the Wright apparatus. The Morkrum tape transmitter was used in 1914 and an improvement on this is now in extensive use. In the early morning a large office can get ahead by having several operators prepare tapes for any number of circuits. Roll paper is used in the receiving machine. An assistant wire chief at Pittsburgh acts as maintainer for five printers. The office cost (in a large office) for printer work for a certain month was 1.6 cents per message as compared with 2.6 cents for Morse work.

Numerous questions were asked about the fitness of tape printers for use with tabulated matter but Mr. Carr, Mr. Shute, and others practically silenced all those who were incredulous. The Union Pacific and the Canadian National, in transmitting tabular matter send it in the form of straight messages and then have a small corps of specialists to make the tables at the receiving office. All of the speakers agreed that most roads have many unnecessary forms.

The Third Day

The first report on Thursday morning was that of Committee No. 7: on inductive interference; on high

personal acquaintance with an applicant, or pressure brought to bear by friends, to influence his judgment.

It has been found that a person otherwise satisfactory may not prove skilful in manipulation of the keyboard, and to meet this problem a digitometer was devised by H. B. McChesney, supervisor of the department, and this is in use in all of the larger W. U. offices for measuring the finger dexterity of the persons tested. This test, as related to touch typing, is made before the applicant is employed. The chief operator in the principal Western Union offices can be applied to for information about these tests.

This committee reported a code of rules for guidance in training telephone operators for private branch Exchange service. One of these rules reads: "13. If the call is for an official of the railroad by name, the operator should say, 'I will connect you with Mr. _____.'" This elicited a good deal of discussion. A member wanted to know why anything should be said; and there was some sentiment in favor of extreme brevity. But the weight of sentiment was in favor of this bit of courtesy. G. R. Stewart, of the Illinois Central, said that on his road courtesy was important; the word is in the company's trade mark. Another element of courtesy is promptness; the railroad officer should not have his secretary call Mr. A. or Mr. B. and then keep Mr. A. or Mr. B. waiting while the secretary calls his boss to the telephone.

The discussion covered a considerable range of subjects including faults in various departments, and members were reminded that telegraph superintendents can-

not correct inefficiency outside their own departments; but it was observed that all telegraph superintendents should hope that heads of other departments would read the proceedings of this meeting and should try to see that they do thus read.

J. F. Caskey (Lehigh Valley), whose road has 10 private branch exchanges in and near New York City, employs a supervising operator to keep the practice of these 10 exchanges up to the highest possible standard. Mr. Caskey was in hearty accord with Rules 13 and 14, both of which tend to inculcate a spirit of courtesy on the part of the operator. No rigid rule can be prescribed for all of the different shades of courtesy, as affected by time saving; the main point is to educate operators to the proper habit of mind.

In this discussion mention was made of the time saving due to keeping track of, and using, the extension telephone numbers of persons with whom conversations are frequent. This often greatly promotes convenience.

The telephone companies have recently announced that central offices had been instructed not to respond to requests for the time of day; and the Western Union has made a similar announcement. This has thrown a great many calls of this kind upon railroad telephone operators, and there was some sentiment in favor of making an announcement similar to those which have been made by the wire companies. Mr. Jones (Baltimore & Ohio) said, however, that he was glad to give the time to such inquirers; the inquirer may be making calculations to travel on a Baltimore & Ohio train.

Committee No. 11, I. C. Forshee (P. R. R.), chairman, reported a code or specification setting forth the requirements for efficient railroad telegraph transmission (20 pages) and a bibliography of papers on electrical communication (9 pages). These were both accepted as information.

Committee No. 12, J. D. Jones (P. R. R.), chairman, presented a report on Radio and Wire Carrier Systems. This report was presented by A. R. Belmont (N. Y., N. H. & H.), vice chairman. The principal developments have been experiments by the American Telephone and

Telegraph Company, in connection with the New York Central, on radio transmission to and from freight tugs in New York Harbor. The committee was unable to make definite recommendations at the present time but it was informally stated that definite progress is being made and important developments are expected at an early day.

Mr. Belmont gave a full account of the experiments with radio on a long freight train on the New York Central between Chicago and Elkhart last July (reported at the time in the *Railway Age*). The advantages of radio transmission in the operation of long trains were discussed at length. The New York Central tests are to be repeated, using two trains at once, one eastbound and one westbound.

R. F. Finley (N. Y. C.), described the use of radio at Gibson, Ind., on the westbound hump, for communicating between the main tower and the retarder towers. The range of transmission of the apparatus used is about 1¼ miles.

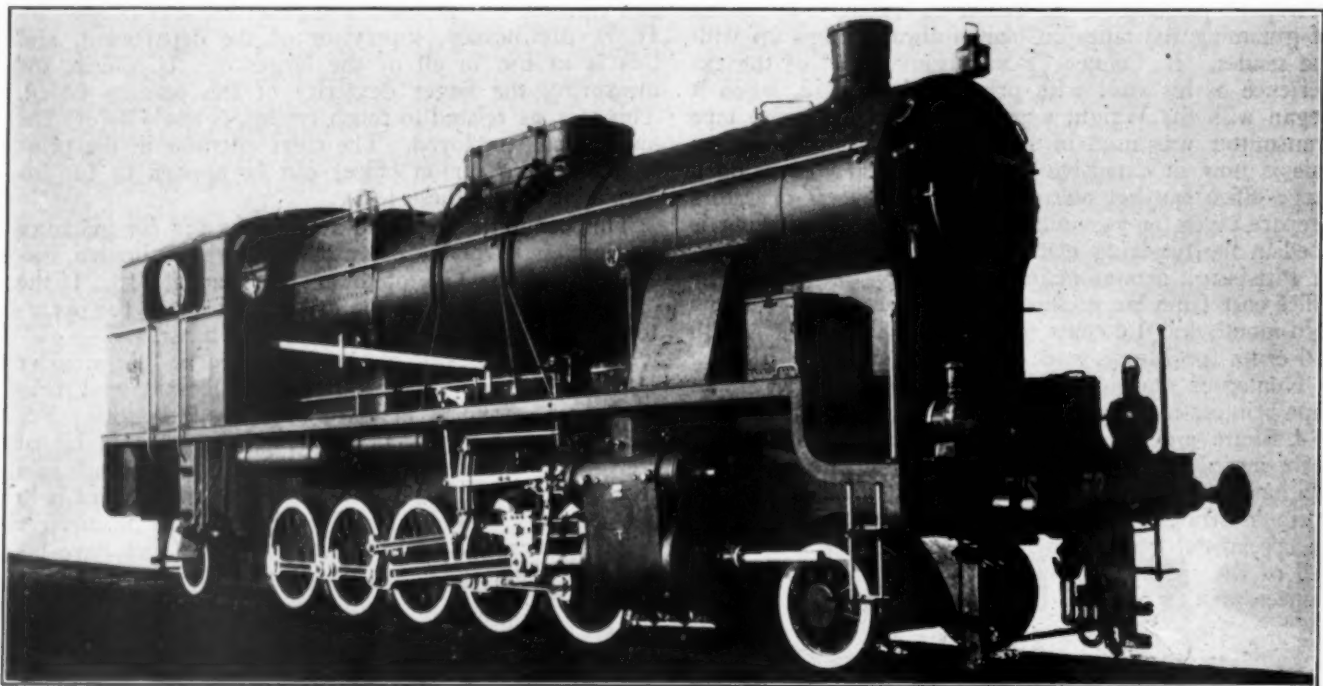
Election of Officers

The election of officers for the ensuing year resulted in the choice of the following:

J. A. Jones (Southern), chairman; W. Rogers (M. P.), first vice-chairman; J. McMillan (C. P.), second vice-chairman. Members of committee of direction, I. C. Forshee (Pennsylvania); W. H. Hall (M. K. T.); J. C. Johnson (Pennsylvania); E. C. Keenan (N. Y. C. Lines); C. A. Plumly (B. & O.); J. C. Rankine (G. N.).

The place selected for the meeting next year is Washington, D. C., and the time, Tuesday, Wednesday and Thursday, October 4, 5 and 6.

Interspersed with the committee reports and discussions, the Section listened to brief addresses by T. W. Carroll, superintendent of the Eastern district of the Western Union; J. A. Droege, general manager, N. Y., N. H. & H.; H. S. Balliet, engineer of train control, New York Central Lines, and Joseph W. Egan, assistant to vice president, Western Union, New York City.



Tank Locomotive Built in Italy for the Italian State Railways

Tendencies in Railway Legislation*

By A. H. Elder

General Solicitor, Central of New Jersey

THE Transportation Act, like so many of the discoveries that have contributed greatly to the advance of our civilization, is based upon a very simple formula. If it had been proposed only two or three years earlier, it would have been rejected by everybody, because even up to 1917 neither railroad men, nor shippers, nor the general public had any appreciation of the extent to which the public interest is involved in conducting a railroad. The railroad was viewed by everybody as primarily a private investment of a relatively small number, which only incidentally touched the public interest. The great, though simple, discovery upon which the Transportation Act is based is that the public has a vastly greater interest in the railroads than has the direction of our railroad legislation. To be sure in order to understand some features of the Transportation Act, as for example, the Consolidation provisions, the Labor section, and the Recapture Clause, we must keep in mind the legislative turmoil of the two years preceding its enactment. However, it is believed that history will place the federal control legislation in parenthesis rather than treat it as a part of the continuous development of our system of federal regulation. Passing over the legislation growing out of federal control, we come to the permanent provisions of the Transportation Act.

Do you recall the apprehension shared at the beginning of 1920 by everybody who was interested in American railroads? Do you recall the long-drawn-out Congressional hearings, the debates, discussions, conferences, editorials and other steps in that mysterious process by which the one hundred and twenty million people of this nation formulate their intuitions into laws? Do you recall the Plumb plan, the Senate committee plan, the Commerce commission plan, the railway executives' plan, the Warfield plan, the Amster plan, the Esch plan? Do you recall how all of these and other plans of regulation conceived by statesmen, politicians, labor leaders, bankers and railway executives, evolved into a senate bill and a totally different house bill, and how the conference committee of the two houses was still struggling to agree on a report as late as February 17, 1920, while such of you gentlemen as were acting as Federal Treasurers, were withholding settlements so that you would have enough cash to meet your next payroll? If you recall those circumstances you will also recall the relief tinged with uncertainty that accompanied the birth of what has been well described as one of the most constructive pieces of legislation ever enacted.

* * * Tom Smith, whose whole fortune is tied up in a little grocery store located on a branch of the North & South Railroad, may be vastly more interested in the success of that railroad than John Jones, an investor in Chicago who owns all of its securities. The investor can distribute his investments to other fields; but as the public discovered during the war period, not merely its prosperity but its very sustenance is dependent upon the adequacy of railroad transportation. It was discovered that the productive capacity of the nation is absolutely limited by the transportation capacity

of its railroads; that their capacity depends upon their credit; that their credit depends on reasonable assurance of a fair and stable return for investment; and that a fair and stable return depends on two things,—first, efficient and economical management,—second, constructive regulation. The significance of this discovery of the complete interdependence of the public and the railroads is evidenced by the fact that all of the plans for regulation brought forward in 1920 provided for a far greater measure of governmental control than anyone had dreamed of two or three years before. The essence of the Transportation Act consists in a recognition of the paramount interest of the public in an adequate and efficient transportation system. Based upon this premise, the Transportation Act granted to the Interstate Commerce Commission a delegation of power unparalleled in history, both in nature and extent.

When this unprecedented delegation of power was enacted into law in 1920, both the railroad managements of the country and the Interstate Commerce Commission were placed on trial. How have they each stood the test?

The answer, so far as the railroads are concerned, is given eloquently by their operating and income statistics. The condition of the railroads in 1920 presented one of the tragedies of economic history. Today it is impossible for any railroad man whether he be an executive or an employee to avoid a glow of enthusiasm when he reads of the almost miraculous improvement since 1920. The result of such efficiency and economy is that railroad credit is being revived, and what is of equal importance, the public, including our law-makers and courts, seems to recognize that this truly wonderful improvement in the condition of the railroads, is not merely a private or selfish gain but one which benefits every industry and every community, and therefore marks a great contribution to the common welfare.

The Task of the Commission

How has the Interstate Commerce Commission carried the load placed upon it? The unmistakable answer to this query is to be found in the respect in which that body is held by every group, every interest and every section of the country.

According to the commission's annual report for 1925 there were taken in proceedings before it last year over 246,000 pages of testimony, or an average of over 670 pages per day. Anyone accustomed to abstracting such testimony knows that that is at least twice as much as one person could read if he did nothing else. No court or administrative body has ever before wrestled with such a staggering load. According to the same report there were filed with the commission in 1923, 1160 formal cases; in 1924, 1343 formal cases; and in 1925, 1505 formal cases. Thus the volume of the commission's work keeps increasing.

Prior to 1918 the commission's activities had become more or less stabilized. Its work consisted chiefly in regulating the carriers as to rates and practices, accounting and safety appliances. In addition, it had the valuation work well under way. Then came the enormous burden of administering the Federal Control and Guarantee Period Statutes. Before those tasks were completed, it had to plunge into the problem of administering the new features of the Transportation Act relating to consolidations and leasing, issuances of securities, abandonments and extensions of lines, car service, automatic train control, and recapture. Recently, owing to the interruption of its valuation work result-

* Abstract of paper read at meeting of Railway Treasury Officers' Association at White Sulphur Springs, Va., September 24.

ing from War Period conditions, and the new importance attaching to this work as the result of the Recapture Clause, the Commission has been swamped with valuation work. In addition, numerous complex and far-reaching consolidation projects are pending, nevertheless at each session of Congress it is proposed that the commission be burdened with numerous additional duties.

There are no less than seven bills now pending in Congress providing for a reorganization of the Interstate Commerce Commission, either by enlarging its membership or by supplementing it by regional commissions. The theory of some of these bills seems to be that to increase the commission's capacity for work you need only enlarge its membership. It seems to be generally recognized that the commission, temporarily at least, is overburdened.

* * * It may be suggested that the great improvement in the physical condition and performance of the railroads during the past six years is attributable solely to the improved or increased energy and wisdom of the railroad managements. An answer to this suggestion is that the railroad managements were efficient and economical in 1905, and 1910, and 1915, but public sentiment was unsympathetic and the law was restrictive, with the result that the transportation system of the nation languished. Must we not conclude that the remarkable progress of the last six years was rendered possible only by the combination of unparalleled economy and efficiency by the railroad managements and men, constructive regulation by Congress and the Commission, and a cooperative attitude on the part of the public?

Present Tendencies of Congress

Like every human product, the Transportation Act was not perfect. The provisions dealing with the labor problem proved unworkable, but happily the relations between the managements and the men were so characterized by mutual understanding that the Watson-Parker bill, which amended the labor section of the act, was practically agreed upon between those representing capital and labor, before it was submitted. Similarly, the provision of the Act requiring the preparation by the Commission of a complete plan for the consolidation of railroads, has proved unworkable, and it seems probable that this feature of the Act will be corrected by the Parker consolidation bill which is now pending. That bill would relieve the commission from the necessity of announcing a complete consolidation plan, and gives it a free hand to decide each application for permission to consolidate from the standpoint of the public interest as it may be involved in the facts of the particular proposal.

There were introduced at the last session of Congress, 124 bills affecting the railroads. Only two of these were enacted into law; the Watson-Parker bill and a bill to amend Section 20 by extending the liability of an initial carrier to shipments that have been reconsigned or diverted.

Among the pending bills are the Fess bill, which proposes to amend the bills-of-lading act, so as to require carriers to issue so-called "clean" bills of lading upon request by the shipper; the Gooding bill, providing for a reduction of the rate of interest payable to the government by those carriers who received loans during federal control; the Howell bill, providing that the securities of carriers shall be sold only after competitive bidding; and two or three bills proposing that Section 3 be so amended as to liberalize the rules governing the collection of freight charges.

Twenty-seven pending bills evidence a tendency to legislate directly on rate matters instead of leaving ratemaking for the commission exclusively. One of them proposes to reduce certain rates on wheat, corn and cotton, by 50 per cent. Two of them propose to reduce rates and fares to the level that was in effect prior to the 40 per cent rate increase. Another proposes to require the establishment of preferential rates on cotton. Another proposes to prohibit the maintenance of port differential rates. Another requires the issuance of mileage books at reduced rates. Eight bills propose to amend the long and short haul provision.

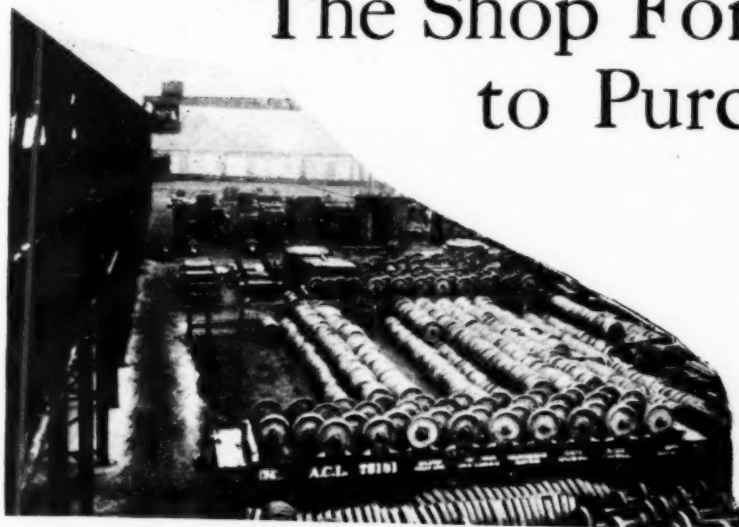
All of these bills relate to subjects that have been under exhaustive investigation and continuous study by the Commission for over 20 years. The tendency to take direct action regarding transportation problems, which only an expert administrative tribunal is qualified to deal with has already manifested itself in the passage of the Hoch-Smith resolution, and it was evidenced at the last session of Congress by determined efforts to abolish the Pullman surcharge and to force a radical revision of the freight rate structure of the country by amendment of the long and short haul clause of the Commerce Act. The vice of such legislation consists not only in the fact that Congress cannot possibly have the familiarity with such technical problems as the Commission has, but in the further fact that direct Congressional action is naturally influenced, and often times controlled, by political rather than business and economic considerations. Such a practice of dealing directly with problems that fall within the Commission's jurisdiction, is clearly inconsistent with our whole system of regulation by qualified experts. It may well be that the ultimate success of the present system will depend on whether public sentiment finally sanctions or frowns upon this growing tendency toward direct legislation.

The tendency of Congress to continue adding to the Commission's duties might be accurately described as a habit, since it has manifested itself at practically every session of Congress during the past 20 years. It has swept into the Commission's jurisdiction, in addition to railroad regulation, the regulation of pipe lines, inter-urban electric railways, telegraph, telephone and cable companies operating either by wire or wireless, and the partial regulation of water carriers. * * *

It is worthy of note, however, that a counter tendency seems discernible in a number of pending bills designed to reduce the commission's work—as for example, bills proposing to repeal the recapture clause, to return to the state commissions a more complete control over intra-state rates, to relieve the commission from making monthly reports on the condition of railroad equipment. Moreover, no less than five bills are pending in Congress which propose to amend the Transportation Act by eliminating that provision which requires carriers to secure a certificate of public convenience and necessity from the commission before undertaking to construct new lines or extend their operations. This particular provision of the Transportation Act has added very substantially to the commission's work, because in 1925, 110 applications for authority to construct new lines or extend operations were filed, and each one of these required the filing of elaborate questionnaires and in many cases the holding of hearings.

The two tendencies of Congress above noted, that is, the tendency to direct legislation and the tendency to overload the Commission, merit careful watching, because if either one of them is carried too far it will render the commission ineffective and thus destroy the very cornerstone of our present system of regulation.

The Shop Foreman's Relation to Purchases and Stores Problems



Mechanical association studies ways to co-operate in reducing stock without risk of shortage

A DEPARTURE from the usual convention of railway mechanical officers was launched recently when the International Railway General Foremen's Association devoted an entire morning of its annual meeting at Chicago on September 9 to a consideration of the railway supply officers' problems. This meeting was the first of this character in the history of this association. It was attended by several railway supply officers, including D. C. Curtis, chief purchasing officer, Chicago, Milwaukee & St. Paul, and chairman-elect, Division VI, Purchases and Stores, American Railway Association; J. G. Stuart, general storekeeper, Chicago, Burlington & Quincy, and past president, Division VI, A.R.A., and W. Davidson, general storekeeper, Illinois Central, and chairman-elect, Committee on Committees, Division VI, Purchases and Stores, A.R.A., all of whom addressed the meeting. It was also marked by the presentation and extended discussion of a report of a special committee on the responsibility of the general foreman for material surpluses and shortages. The address of D. C. Curtis was presented in the issue of *Railway Age* of September 18. The report of the committee which, under the leadership of F. M. A'Hearn, general shop foreman, Bessemer & Lake Erie, Greenville, Pa., found that big profits to railroads await a better understanding of supply problems by mechanical officers and their more active and hearty co-operation with supply officers, is reproduced in part as follows:

The office of the general foreman in the railway shop is, in a way, an auxiliary to the purchasing and stores department. The general foreman's position is such that he can help or hinder the efforts of the stores department in giving satisfactory service by having the necessary materials on hand at all times without an accumulation of slow moving or obsolete material.

A survey of material costs shows that in classified repairs they may run in excess of 50 per cent of the labor cost, while in running repairs they may be as low as 10 per cent of the labor cost. A conservative estimate is 60 per cent labor and 40 per cent material during the service life of the locomotive. This cost, while influenced by the size of power units and local conditions, may safely be taken as at least 10 cents per locomotive mile run for locomotive material. We believe that \$10,000,000 per month is a low figure for the expenditure for materials used in locomotive maintenance on the railways of the United States.

On December 31, 1920, shortly after the end of fed-

eral control, Class I railroads had material in stock with an estimated value of \$755,563,278. At the end of 1924 the value of material held in stock by the same railroads had been reduced to some \$530,000,000. An approximate reduction of 30 per cent was accomplished during the four-year interval.

U. K. Hall, general supervisor of stores, Union Pacific, has stated (*Railway Age*, June 11, 1926, page 1628) that it cost from 15 per cent to 25 per cent to carry material. Other supply officers who have been questioned on the subject place the estimate at from 10 to 20 per cent. These figures show that slow moving materials for which the general foreman is, in a measure, responsible are a greater cost to the transportation companies than might appear to the mechanical man. Every general foreman knows the cost of shop delays brought about by inability to secure material when needed.

The desired relations between the mechanical department and the stores department should provide a quick turnover of materials for the stores department interests and an ample supply of materials at all times for the mechanical department. Our part in aiding to bring about this condition is to co-operate in the fullest manner with our respective stores departments in reducing their material inventories by disposing of slow moving material.

20,000 Less Parts in Stock

The answer of I. H. Lance, general storekeeper, D. L. & W., to the inquiry of the committee eliminates one of the popular excuses that an increase in both the number of items carried and in the total value of items carried is an inevitable result of the growth of modern locomotives and cars. On July 1, 1918, this road carried 58,000 items of material. On June 1, 1926, these items had been reduced to 38,000. This reduction in the number of items carried in stock resulted from standardization and elimination from stock of items which it was found unnecessary to carry.

Concrete illustrations of what mechanical departments have accomplished in their co-operation with stores departments are found in the following: One railroad which three years ago carried boiler grade sheet steel in 70 sizes now carries 20 sizes. There were no complaints of cutting waste attendant upon this reduction. In another instance rough turned driving axles carried in stock in 4 sizes finish into 39 sizes of axles. The

Santa Fe has reduced the various sizes of cylinder packing rings carried from 181 to 82. A well known eastern railroad has standardized locomotive boiler check sizes and now has one size boiler check interchangeable for right or left to fit any locomotive owned by the company.

Ten Per Cent of Scrap Is Usable

The committee inquired into the operation of the reclaiming departments of certain railroads in order to ascertain whether or not usable materials were allowed to pass from the shops to the scrap dock. One road in particular, that has for years given special attention to the reclaiming of materials, found last year that 10½ per cent of the material salvaged at the reclaiming plant was still usable without repairs. This is rather surprising when it is considered that this road has given so much attention to material conservation. It shows the possibilities in shops where material conservation has not been followed closely.

Your committee finds from contact with stores department heads in various parts of the United States that there is a general indifference on the part of all departments to materials, except with reference to complaints regarding shortages. The general storekeeper of the road previously mentioned as having reduced the number of stock items from 58,000 to 38,000 has made some statements, which we quote in part, as follows:

"My experience * * * indicates very clearly that the mechanical department, as well as other departments, is not likely to call attention to surplus materials, but is loud in complaints when a shortage exists. It should be made known to foremen in the mechanical department or any other department, by one in authority, that they must interest themselves in materials for the purpose of eliminating surpluses and avoiding shortages as far as possible. In the beginning foremen show indifference but with the proper pressure, they soon realize the responsibility in assisting to maintain a minimum stock. With changing conditions it is absolutely necessary that materials be checked constantly with the departments using them."

Industries Have Better Turnover

Investigation shows that material turnover is the most rapid and that serious material shortages are infrequent in shops that conduct their work according to carefully arranged programs. To illustrate what this means in the manufacturing industry, the Dodge Automobile Company turns over 56 per cent of its entire stock each 11 days and the entire stock is turned over more than 12 times per year.

F. D. Reed, vice-president and general purchasing agent of the Chicago, Rock Island & Pacific, in an address before the Western Railway Club, (*Railway Age*, October 24, 1926, page 750) outlined Rock Island practice as follows:

"During the latter part of the year a budget for the following year is made up. The purchasing department confers with the mechanical department to ascertain the number of applications of equipment, such as feed water heaters, superheaters, syphons or similar articles that will be required by months during the coming year. The purchasing department is thus enabled to purchase and deliver material * * * to suit actual needs."

We find that the same practice, with slight modifications, is followed by many other roads in classified repair work as well as in additions. The general foreman can extend this practice to suit actual needs. He must consider his source of supply in outlining work progress.

A periodical examination of stock lists and issues in order to detect slow moving or non-essential material is a duty of mechanical department officers. There are officers on many roads that have shown notable results

in stock reductions. Mechanical department officers can find many opportunities in the course of their work to divert slow moving materials into channels where they will be used. Minor alterations of slow moving or obsolete castings or parts will often enable them to be disposed of by other means than by scrapping.

Standardization of parts cannot be too strongly stressed. Probably no other action taken by the mechanical department will make for the solution of the material problem more than this.

Your committee recommends utilizing to the fullest extent the aid and advice of service men of the various supply companies in matters pertaining to their own particular products. The suggestions of these specialists will often serve to avoid unnecessary renewals of parts discarded through lack of proper judgment on the part of the mechanic or removed as a matter of shop routine. Careful workmanship at repair periods and proper maintenance and proper supervision of light repairs will greatly increase the service of equipment between shoppings and inevitably secure a longer service life of the parts that compose the equipment unit.

Modernizing Repair Methods Helpful

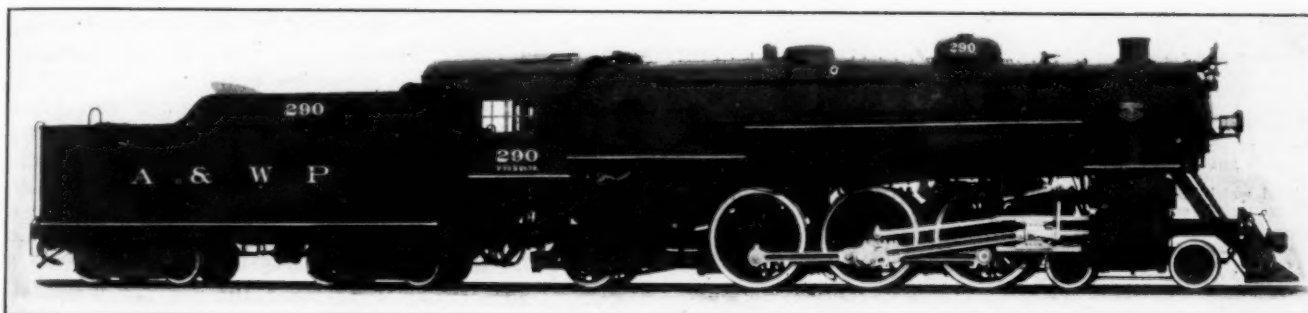
Your committee recommends the use of modern repair methods in the application of long service materials to various wearing surfaces, as for example, bronze wearing surfaces on cast iron cylinder or valve tee rings; bronze or steel removable plats on driving boxes.

Your committee finds that there is a decided variation in shop practices in establishing wear limits for locomotive parts. While it is not practicable to say, for example, that all locomotive driving box bearings for power of certain sizes should be run to some arbitrary condemning limit, it is usually found that the practice in scrapping such wearing parts is subject to wide differences of opinions.

Another aspect of this in shop practice is found in the method on some roads of re-boring worn locomotive valve bushings once only, and to whatever size they will make up, as contrasted with other roads that have reamers varying by ⅛ in. sizes, by which valve bushings are re-bored three times. Other roads grade their sizes by sixteenths of an inch instead of eighths. It is certain that some of these practices possess advantages over others. Your committee recommends careful consideration of wear limits. We feel that observance of this suggestion will greatly reduce the demand for new materials.

We find that locomotive and car department general foremen, by assuming their share of responsibility for material surplus and shortage, have effected savings in many ways. Shop delays, unnecessary items, inactive stocks, obsolete parts, and serviceable materials being lost as scrap, are all being reduced through their efforts. At the same time a closer understanding is established between departments, which works for the mutual betterment of all.

THE ACTION of the Missouri Public Service Commission in refusing to grant a certificate of convenience and necessity to the St. Louis-Kansas City Short Line for the construction of an electric line between St. Louis and Kansas City, about 290 miles, was upheld on September 20, by the circuit court at Jefferson City, Mo. Following the original action of the commission in May, 1925, the promoters of the railway were allowed a year in which to present additional evidence of financial security. The promoters have filed an appeal of the circuit court's decision with the Missouri Supreme Court on September 25.



An Atlanta & West Point Pacific Type Locomotive Which Weighs 504,000 lb. in working order and develops a tractive force of 47,500 lb.

Pacific Type Locomotives for the A. & W. P. and W. of A.

*Designed to haul heavy passenger trains over a rolling
division—Develop a tractive force of 47,500 lb.*

TWO Pacific type locomotives have been delivered by the Lima Locomotive Works, Inc., Lima, Ohio, one to the Atlanta & West Point, and the other to the Western Railway of Alabama, which roads form a 175-mile line between Atlanta, Ga., and Montgomery, Ala. The Atlanta & West Point section of the division is 86 miles long, with a difference of elevation between Atlanta and West Point of approximately 500 ft. The upward trend of the elevation is toward the east end of the division, with ruling gradients of 0.8 per cent both east and west, the numerous grades averaging about two miles in length. These locomotives handle trains consisting of one express car, one combination baggage and coach, one coach, one dining car and from five to eleven sleeping cars, making a total of nine to fifteen cars in a train. The train, when it consists of fifteen cars, weighs approximately 1,263 tons. The schedule time for the 175 miles, including seven stops, is 4 hrs. 50 min.

The locomotives develop 47,500 lb. tractive force, with 200 lb. steam pressure and 73-in. diameter driving wheels. The diameter and stroke of the cylinders is 27 in. by 28 in. The total weight of each locomotive is 303,500 lb., with 192,500 lb. on the drivers, which gives a factor of adhesion of 4.05. The average weight on each pair of driving wheels is 64,166 lb., which places these locomotives among the heaviest of the Pacific type. The weight on the engine and trailer trucks is 55,500 lb. each.

The Boiler and Running Gear

The conical type boilers, which have a combustion chamber 38 in. long, contain 190, 2¼-in. tubes and 45, 5½-in. flues which are 19 ft. long. Bituminous coal is used as fuel and is burned in a firebox 120¼ in. long by 84¼ in. wide, having a grate area of 70.8 sq. ft. The locomotives are provided with cast steel ash pans. The total evaporative surface is 3,669 sq. ft., and that of the superheating surface is 994 sq. ft., making a total combined heating surface of 4,663 sq. ft.

The steam distribution is controlled by 14-in. piston valves operated by the Baker valve gear which is reversed by the Alco reversing gear. The valves have a maximum travel of 7 in.

The Commonwealth Economy engine trucks and Delta trailer trucks are used. The rectangular water bottom tender, which has a water and coal capacity of 11,000 gal. and 15 tons, respectively, when loaded weighs 200,500 lb., making the combined weight of the locomotive and tender 504,000 lb. The tender is connected to the locomotive by the Franklin unit drawbar and radial buffer. A Type K distance-speed recorder is located in the locomotive cab.

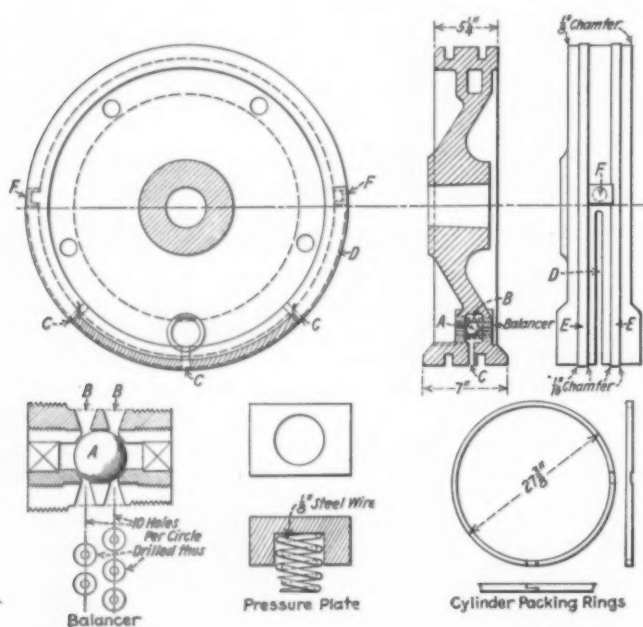
The following table contains the principal dimensions, weights and proportions of these locomotives.

Railroad	Atlanta & West Point
Type of locomotive.....	4-6-2
Service	Passenger
Cylinders, diameter and stroke.....	27 in. by 28 in.
Valve gear, type.....	Baker
Valves, piston type, size.....	14 in.
Maximum travel.....	7 in.
Exhaust clearness.....	¼ in.
Lead in full gear.....	¼ in.
Weights in working order:	
On drivers.....	192,500 lb.
On front truck.....	55,500 lb.
On trailing truck.....	55,500 lb.
Total engine.....	303,500 lb.
Tender	200,500 lb.
Wheel bases:	
Driving	14 ft.
Rigid	14 ft.
Total engine.....	37 ft.
Total engine and tender.....	72 ft. 5½ in.
Wheels, diameter outside tires:	
Driving	73 in.
Front truck.....	33 in.
Trailing truck.....	43 in.
Journals, diameter and length:	
Driving main.....	12 in. by 13 in.
Driving others.....	11 in. by 13 in.
Front truck.....	6½ in.
Trailing truck.....	9 in. by 14 in.
Boiler:	
Type	Conical
Steam pressure.....	200 lb.
Fuel, kind.....	Bituminous
Diameter, first ring, inside.....	78 in.
Firebox, length and width.....	120¼ in. by 84¼ in.
Combustion chamber length.....	38 in.
Tubes, number and diameter.....	190—2¼ in.
Flues, number and diameter.....	45—5½ in.
Length over tube sheets.....	19 ft.
Grate area.....	70.8 sq. ft.
Heating surfaces:	
Firebox and comb. chamber.....	299 sq. ft.
Arch tubes.....	28 sq. ft.
Tubes	2,117 sq. ft.
Flues	1,225 sq. ft.
Total evaporative.....	3,669 sq. ft.
Superheating	994 sq. ft.
Comb. evaporative and superheating.....	4,663 sq. ft.
Special equipment:	
Brick arch.....	Security
Superheater	Type A

Tender:	
Style	Rectangular
Water capacity	11,000 gal.
Fuel capacity	15 ton
General data estimated:	
Rated tractive force, 85 per cent.	47,500 lb.
Cylinder horsepower (Cole)	2,624
Weight proportions:	
Weight on drivers ÷ total weight engine, per cent.	58.2
Weight on drivers ÷ tractive force	4.05
Total weight engine ÷ cylinder hp.	125.9
Total weight engine ÷ comb. heat. surface	60.9
Boiler proportions:	
Comb. heat surface ÷ cylinder hp.	1.78
Tractive force ÷ comb. heat. surface	10.26
Tractive force X diam. drivers ÷ comb. heat. sur- face	743
Cylinder hp. ÷ grate area	36.8
Firebox heat. surface ÷ grate area	4.23
Firebox heat. surface, per cent of evap. heat. sur- face	8.17
Superheat. surface, per cent of evap. heat. surface ..	26.2

The Martyn Balanced Piston Head

THE Martyn balanced piston head, the detailed construction of which is shown in the drawing, is designed with the principal object of lifting the weight of the piston off the bottom of the cylinder, thus reducing to a considerable extent the amount of wear on both the piston head and cylinders. The piston head is a hollow casting with inside reinforcing ribs. The sand cores are removed through the five cored holes shown



Piston Head Designed So That the Weight is Carried on a Cushion of Steam Instead of on the Bottom of the Cylinder

around the inside circumference on the face of the piston head. All of the holes, except the bottom hole, are drilled, tapped and plugged. The bottom hole is used for the balancer steam valve, a cross section of which is shown at the lower left corner of the drawing.

The balancer consists essentially of three separate pieces made of tool steel. The steel ball *A* which serves as a floating valve is a fourth piece. The hole in the piston head for the balancer is tapped with a special tap somewhat similar in design to a staybolt tap. The balancer casing is threaded as shown in the drawing. Twenty tapered holes *B* are drilled in two parallel rows around the center of the casing for ports to allow steam

to escape from the balancer casing into the cored cavity in the piston head. The balancer casing is tapped at both ends for plugs which serve as seats for the ball *A*. These plugs are drilled through the center for steam ports, the outside end of the hole or steam port being made square for the insertion of a square end wrench. In order to obtain minimum wear on the ball *A*, as well as efficient operation of the balancer, the ball is allowed 1/12 in. roll or travel. This travel is regulated by screwing the plugs in or out as necessary.

As the piston moves forward the ball *A* is seated against the rear plug by the pressure of the steam, and steam is allowed to enter the cored cavity in the piston head through the ports *B*. Steam pressure is built up in the cavity and thence through the port *C*, which is drilled in the piston head directly under the balancer. A groove *D*, machined around the underside of the piston head, permits the steam to fill the space between the pressure plates *F* and the packing rings. The pressure built up in this space is sufficient to lift the piston and piston head. The pressure plates *F* are forced out against the walls of the cylinder by a 1/8-in. steel wire spring.

It is reported that piston heads of this design have been in operation for over a year on locomotives being used in both freight and passenger service and are rendering good service, particularly in reducing piston and cylinder wear. The inspection at the end of the year showed that the top cylinder walls had acquired a polish in all cases. One superheated locomotive was operated for nine months, 16 hours a day, with an average train load of 74 cars. At the end of this time the observers reported a total wear on the piston head of 3/32 in. The balanced piston head is marketed by Martyn's Balanced Piston Company, 317 West 24th Street, Vancouver, Wash.

Car Loading Reaches Average of Million Cars a Week

WASHINGTON, D. C.

REVENUE freight car loading again broke all previous records in the week ended September 18, with a total of 1,187,011 cars. The previous record was that of the week ended September 4, a total of 1,151,346 cars. The week of September 18 was not only the seventeenth this year in which the million-car mark was exceeded but it brought the cumulative total for the thirty-eight weeks of the year to date up to an average of over a million cars a week. The total loading for the thirty-eight weeks was 38,068,949 cars, as compared with 36,771,919 for the corresponding period of last year, an increase of 3.6 per cent.

The total for the week was an increase of 88,384 cars as compared with the corresponding week of last year and an increase of 110,164 cars as compared with 1924. All districts showed increases as compared with the corresponding week of both years except the Central Western, which fell below the 1924 figure, and all classes of commodities showed increases as compared with both years except grain and grain products, which showed a decrease of 2,972 cars as compared with last year and of 17,404 cars as compared with 1924. Coal loading amounted to 206,638 cars, an increase of 34,713 cars as compared with the corresponding week of last year and miscellaneous freight loading, 450,571 cars, showed an increase of 23,518 cars, while there was also an increase of 18,111 cars in the loading of miscellaneous freight.

The summary, as compiled by the Car Service Division of the American Railway Association, follows:

REVENUE FREIGHT CAR LOADING—WEEK ENDED SEPTEMBER 18, 1926			
Districts	1926	1925	1924
Eastern	274,574	240,094	247,299
Allegheny	240,388	210,491	215,535
Pocahontas	61,797	57,371	48,999
Southern	166,272	164,179	148,733
Northwestern	185,827	174,893	164,437
Central Western	169,768	165,059	177,807
Southwestern	88,385	86,540	74,037
Total Western districts	443,980	426,492	416,281
Total all roads	1,187,011	1,098,627	1,076,847
Commodities			
Grain and grain products	51,134	54,106	68,538
Live stock	39,600	33,508	38,509
Coal	206,638	171,925	189,486
Coke	12,471	11,441	8,943
Forest products	72,996	70,274	68,046
Ore	77,807	59,696	48,367
Mdse. L. C. L.	275,794	270,624	255,752
Miscellaneous	450,571	427,053	399,215
September 18	1,187,011	1,098,627	1,076,847
September 11	1,031,081	975,499	1,061,781
September 4	1,151,346	1,102,785	921,303
August 28	1,136,233	1,124,438	1,020,809
August 21	1,088,791	1,079,995	982,760
Cumulative total, 38 weeks	38,068,949	36,771,919	34,613,989

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended September 18 showed an increase of 11,877 cars over the previous week. Compared with the same week last year the increase was 1,089 cars.

Commodities	Total for Canada			Cumulative totals to date	
	Sept. 18, 1926	Sept. 11, 1926	Sept. 19, 1926	1926	1925
Grain and grain products ..	15,922	9,617	20,275	250,000	233,760
Live stock	2,645	2,229	2,621	75,745	83,351
Coal	7,309	6,765	6,601	199,073	127,815
Coke	323	342	307	13,326	10,171
Lumber	3,465	3,288	3,580	134,801	132,583
Pulpwood	2,033	1,979	1,703	104,234	100,698
Pulp and paper	2,145	1,854	2,191	89,121	75,244
Other forest products	2,663	2,245	2,297	115,062	104,687
Ore	2,320	2,171	1,889	63,200	50,655
Merchandise, L. C. L.	17,644	15,313	16,100	598,992	562,812
Miscellaneous	15,583	14,372	15,573	515,694	487,323
Total cars loaded	72,052	60,175	73,141	2,159,248	1,939,099
Total cars received from connections	37,905	34,865	31,882	1,372,087	1,222,363

Chicago Great Western "English Type" Locomotive

THE illustration shows a locomotive which hauls the Red Bird Limited of the Chicago Great Western, operating as a non-stop train between Rochester, Minn., and St. Paul. The locomotive bears a strong resemblance to English power owing to the ab-

sence of outside piping and to a special color scheme followed in the painting. The predominant color is maroon, with gold leaf striping on boiler and cylinder jackets, cab and tank. The front end and smoke stack, jacket bands, cab roof, tender frame and tender trucks are painted black. All letters and figures are in gold leaf. The steel work, including the rods, is highly polished. By painting the coaches in the Red Bird the same shade of maroon as the locomotive, the train is given a highly attractive and distinctive appearance.

A number of heavy passenger locomotives on the Chicago Great Western have also been converted to this standard except for the absence of special colors. The piping and other outside connections and appliances which usually cover the boiler are to a considerable extent placed under the jacket, giving the locomotives a neater and more attractive appearance. Extensive experience on the Chicago Great Western indicates that with piping properly installed initially, no trouble results from leaks developing under the jacket.

Railroad Extension Made Possible by Farmers

FARMERS and business men along the Great Northern in Montana who purchased \$325,000 worth of this company's stock to make possible the 50-mile extension of the road from Scooby, Mont., to Opheim, have been rewarded by being able to ship out over 2,000,000 bu. of grain this year at a saving of more than \$500,000 in transportation costs. The construction of this line, which was completed on August 25, is the most important railroad construction undertaken in Montana since the war. The building of the branch had been advocated by the farmers of Daniels and Valley counties, lying next to the Canadian boundary, for many years but its construction was prevented by the entrance of the United States into the war.

When the railways were returned to private ownership the Great Northern, in common with other roads, found itself occupied with the rehabilitation of its main line system. However, with the persistent petitioning for the extension by the farmers, the Great Northern announced that if the farmers themselves would absorb \$250,000 worth of stock the line would be built. At a meeting of railroad officers and 500 farmers from the surrounding territory, including some from across the



Covered Piping and Special Color Scheme Give the Chicago Great Western "English Type" Locomotive a Distinctive Appearance

border in Canada, held at Opheim in May, 1925, more than 600 farmers and a few business men contributed \$325,000, thereby over-subscribing the sum set by the railroad by \$75,000. The total cost of construction was \$1,250,000.

This is the first time in the history of the Northwest that farmers have assisted in financing an extension. The most unusual feature of this stock sale is the readiness with which the purchasers of the stock complied with the regulations making it mandatory for the Great Northern to sell its treasury stock at a par value of \$100 per share, notwithstanding the fact that at that time the stock could have been purchased in the market for \$69 a share. This stock is already selling for \$15 a share more than at the time they bought it, and it is predicted that the improvement in conditions which is reflected in the better prices of the stock will continue until as an investment the stock will be worth all the farmers paid for it and more. In the meantime they are pleased at their good fortune in having the extension completed in time to move their crop this year. The long haul to market has now been eliminated and has resulted in a saving that will pay for the entire amount of stock purchased, for over 2,000,000 bu. of grain will be shipped from this extension at a saving of more than \$500,000 to the shippers.

The new line furnishes transportation facilities for a rich agricultural region over 2,250 sq. mi. in extent, 80 per cent of which is tillable and equals in fertility the finest farm land in the state. There are about 1,500,000 virgin acres available for cultivation or an area about twice the size of the state of Rhode Island.

The producing farms in the territory served by this extension were 30 to 55 miles away from the nearest railroad shipping point, and necessitated the hauling of crops from farms by teams and tractors over these distances to Glasgow, Nashua, Wolf Point and other stations on the main line of the Great Northern, or to Scobey. The cost averaged from one-half to three-quarters of a cent per bushel per mile, or about 35 to 40 cents per bushel for the team or tractor haul. The wheat raised in this region, however, is of such high grade that it commands a premium of 8 to 50 cents per bushel on the Minneapolis markets, and notwithstanding this laborious and expensive method of reaching the railroad, the farmers have profited greatly by their industry. The opening of the

new line has brought them an average saving of 25 cents per bushel in the cost of transportation.

The maximum grade of the new road is 1 per cent eastbound and 1.5 per cent westbound. The curvature is light, the maximum being four degrees, with the exception of one five-degree curve. The country is quite rolling, altogether treeless, and consists of a rich black soil, quite free from rock or boulders.

The grading was started in July, 1925, and 20 miles were completed that season and track laid thereon to the town of Peerless. The balance of the grading was completed in August, 1926, and track laid thereon, reaching Opheim on August 25.

The track is laid with second hand 75-lb. and 77½-lb. rail. The 20 miles from Scobey to Peerless, laid in 1925, consisted of 60 ft. panels of rails and ties taken up intact from two lines abandoned on the Mesabi division in Minnesota. These 60 ft. panels of track were swung into place on the new grade by locomotive cranes. The 30 miles laid in 1926 consisted of second hand rail and new ties, the ties being generally hauled ahead by teams and the rail swung into place by locomotive cranes. Two rails were bolted together and handled as one.

The bridging is generally light, crossing moderate size waterways and is of pile and timber construction, except for a 96-ft. second hand steel span across the Poplar river and an 80-ft. second hand steel span across the west fork of the Poplar river. Galvanized iron pipe of from 18-in. to 36-in. diameter was used for the smaller drainage areas.

Rapid improvements in various directions have already resulted from the completion of this extension. About 300 new farm tractors have been sold in the district this year, and a big demand for land is anticipated for the state land sale in Valley and Daniels counties this fall.

The new towns along the line are rapidly increasing in population and making rapid progress in various enterprises. The city of Four Buttes, ten miles west of Scobey, already has two elevators completed and another under construction. In addition, it has hotels, stores and lumber yards. This town will serve a large territory. Richland, ten miles west of Peerless, promises to be a very active shipping station. Glentana has a number of stores, a good hotel and two elevators under construction. Opheim, the terminus of the line, now has a population of about 600.



A Suburban Station on the Buenos Aires Western

General News Department

The Administrative Board of the American Engineering Council will meet at Ithaca, N. Y., on November 11 and 12.

Percy R. Todd, president of the Bangor & Aroostook, will be the speaker at the October 5 meeting of the New England Railroad Club at the Copley Plaza Hotel, Boston, Mass.

The Canadian Railway Club will hold a meeting on October 12 at 8:30 p. m. at the Windsor Hotel, Montreal, when a paper on the Fuel Problem of Canada will be read by Leslie R. Thomson, consulting engineer, Montreal.

The Mutual Beneficial Association of Pennsylvania Railroad employees held a three days' meeting at the Benjamin Franklin Hotel, Philadelphia, on Monday, Tuesday and Wednesday of this week, with an attendance of about 1,000 delegates. An address of welcome was delivered by General W. W. Atterbury, president of the road.

The Interstate Commerce Commission has modified its train control order as to the Atchison, Topeka & Santa Fe to permit an installation between Chillicothe and Pequot, Ill., instead of between Chillicothe and Chicago, subject to the condition that both the track of the Santa Fe and that of the Chicago & Alton between Pequot and Joliet be promptly equipped with automatic signals.

The average cost of fuel for road locomotives in freight and passenger train service (charged to operating expenses) for Class I roads for the month of July was \$2.58, according to the Interstate Commerce Commission's monthly fuel statistics. This compares with \$2.67 for July, 1925. The average cost of fuel oil was 2.94 cents per gallon as compared with 3.34 in July last year. For the seven months ended with July the total cost of coal and fuel oil was \$184,468,715, as compared with \$187,702,614 for the corresponding period of last year.

Water Softening for Boiler Feed will be the subject of a symposium conducted by the Western Society of Engineers, Chicago, on Monday evening, October 4. The speakers will include R. E. Coughlan, supervisor of water softeners, Chicago & North Western, Chicago; R. C. Bardwell, superintendent water supply, Chesapeake & Ohio, Richmond, Va., and C. W. Sturdevant, assistant engineer of tests, Southern Pacific, San Francisco, Cal. The program will include a discussion of the economics as well as the technical phases of water treatment with a discussion of Zeolite and other processes.

New York, New Haven & Hartford Awards Trucking Contracts

The New York, New Haven & Hartford has awarded five contracts to trucking companies in New York for delivery by motor truck of certain classes of freight from its Harlem terminal through a theoretical freight station at 59th street, Manhattan, in accordance with a tariff recently authorized by the Interstate Commerce Commission. The trucking companies to which the contracts have been awarded are: the United States Trucking Corporation, the Keahon Trucking Corporation, E. A. Thompson, Inc., James A. Smith, Inc., and the Motor Haulage Company, Inc. The Thompson Company was awarded, after competitive bidding, a contract for the transportation by motor truck of such small lots of lighterage as may lend themselves to truck handling. The general details of the plan of the New York, New Haven & Hartford to gradually replace handling of freight by water from the Harlem terminal to its East River piers, inaugurating motor truck service in its stead, was given in the *Railway Age* of September 11, 1925.

B. & O. Pensions Increase

The directors of the Baltimore & Ohio, at their meeting on September 29, when the rate of dividend on the common stock was made six per cent, an advance from the five per cent heretofore paid, adopted a resolution increasing the pensions paid retired employees by 50 per cent. The number of employees now on the pension roll is 1,344. The total amount paid in pensions in 1925 was \$466,953. This road has had a pension system in operation for more than 40 years, and in that time has paid out over \$6,500,000. The new rate will be one per cent of the average compensation for the ten years next preceding retirement, multiplied by the number of years of service. The minimum pension will be \$300 and the maximum will be 50 per cent of the salary.

Disastrous Collision at Bethlehem, Pa.

In a crossing collision of passenger trains of the Central of New Jersey and the Lehigh Valley at Bethlehem, Pa., at 5:45 o'clock on the morning of September 27, seven passengers and one trainman were killed and about 40 passengers and two trainmen were injured. Approaching Bethlehem from the west these two railroads lie side by side, the Central on the north side of Lehigh river and the Lehigh Valley on the south; approaching the station, the Central turns to the right, crosses the river and within less than 100 ft. of the south end of the bridge crosses the Lehigh Valley track nearly at right angles.

Eastbound Central train No. 306, moving at about 15 miles an hour, passing signals set against it, ran into the side of the eastbound Lehigh Valley train No. 6, moving at about the same speed, overturning a coach, the second or third car from the locomotive. All of the passengers killed were said to have been in this coach.

Changes in Membership of

A. R. E. Executive Committee

Changes in the membership of the executive committee of the Association of Railway Executives were announced following a meeting of the committee on September 24, held at the Yale Club, in New York. The committee accepted the resignations of J. H. Hustis, former president of the Boston & Maine, and C. E. Schaff, former president of the Missouri-Kansas-Texas. The following new members were named: J. M. Davis, president of Delaware, Lackawanna & Western; T. C. Powell, president of the Chicago & Eastern Illinois; R. E. M. Cowie, president of the American Railway Express Company; and C. N. Whitehead, president of the Missouri-Kansas-Texas.

The committee decided to call a meeting to be held in New York on November 18. A meeting of the member roads of the American Railway Association will be held in New York on the preceding day.

Sesqui Holds Inter-railroad Track and Field Meet

The "railroad world championship athletic meet," sponsored by the Sesqui-Centennial Exposition and held at Philadelphia on September 24-25, was participated in by athletic representatives from 12 railroads and electric lines. There were in all some 600 contestants in the various events, including baseball games. The number of entries by the various railroads varied widely.

The Pennsylvania was the winner of the track meet, scoring 184 points. The Southern Pacific made 84; the Union Pacific, 31; the Long Island, 23; Baltimore & Ohio, 6½; Interborough Rapid Transit, 6; Reading, 5; Pittsburgh Railways, 4; Canadian National, 3. Other railroads which had some contestants were the Chesapeake & Ohio, the Lehigh Valley and the Southern.

The Baltimore & Ohio won the baseball championship by defeating the Pennsylvania general office team. Previously the

P. R. R. general office team had defeated the Long Island team, as had the B. & O. the Union Pacific.

In the evening of September 25, following the track meet, a banquet was tendered the contestants and officers by the Sesqui-Centennial Athletic Committee. At this banquet speakers expressed the hope that this meet would be the first of a series of annual inter-railroad contests.

Hundredth Anniversary of the First Railroad

The Granite Railway Company, Quincy, Mass., is to celebrate on October 10, 11 and 12, the one hundredth anniversary of its opening, which was on October 7, 1826. Pursuant to action taken by the town of Milton two years ago, sermons and addresses are to be delivered on Sunday, the 10th, and appropriate exercises on Monday and Tuesday. The town of Milton and the city of Quincy are both interested. On Tuesday, Columbus Day, exercises will be held at East Milton station of the New York, New Haven & Hartford which road uses a part of the original right-of-way of the Granite Railway. This railroad, as is well-known, was a line less than three miles long, built to carry granite from quarries in Quincy to the Neponset River, in Milton, for use in building Bunker Hill Monument.

Among the speakers will be Governor Fuller of Massachusetts, Vice-President A. P. Russell of the New York, New Haven & Hartford, and Mayor Barbour of Quincy. A commemorative bronze tablet is to be unveiled.

Railroads Carry 30,000 from New York to Philadelphia to Dempsey-Tunney Fight

The Pennsylvania and Central of New Jersey carried some 30,000 passengers from New York to Philadelphia to witness the fight between Jack Dempsey and Gene Tunney for the heavy-weight championship, held in the Sesqui-Centennial Exposition stadium on September 23. The Pennsylvania transported approximately 20,000, while the Central of New Jersey supplied transportation for approximately 10,000. The peak of the rush to Philadelphia came between the hours of 1 and 5 p. m., when both railroads were kept busy supplying special trains for the crowds which jammed the Pennsylvania station and the Jersey Central terminal.

The Pennsylvania ran a total of 25 extra trains to Philadelphia, which included 9 private trains. Approximately 264 extra passenger coaches were used in the movement. Trains were supplied as the traffic demanded, extra service to Philadelphia starting at 11 a. m., and continuing until 4 p. m.

Cross Tie Purchases in 1925

The Department of Commerce announces that according to data collected in co-operation with the Department of Agriculture, 111,351,759 ties were purchased by the steam and electric railroads in 1925, as compared with 135,976,117 in 1923, the steam road purchases amounting to 105,163,800 in 1925, and to 129,133,347 in 1923, a reduction of approximately 20 per cent. In these totals, switch ties and bridge ties are reduced to an equivalent in cross ties of 32 f. b. m. Of the ties purchased by the steam roads 13,193,120, or approximately 12½ per cent, were treated prior to purchase and 91,970,680 were untreated. The figures are preliminary and are subject to such correction as may be necessary upon further examination of the returns.

The data show that oak ties still constitute a large part of the ties purchased amounting to 47,255,603, or 42½ per cent of the total, but showing a falling off in percentage from 1923 when they accounted for almost 50 per cent of the total. Pine ties, second in point of numbers, were purchased to the amount of 20,421,350 or about 18 per cent, while the 12,708,863 Douglas fir ties purchased constituted about 11½ per cent of the total, the percentages for the pine and Douglas fir ties showing little change from 1923. The decrease in the ties requirements for 1925 undoubtedly reflects the benefits of timber preservation.

The same statement shows that 3,281,514 poles were purchased in 1925 by the steam and electric railroads, electric light and power companies, and commercial telegraph and telephone companies, the corresponding figures for 1923 being 3,060,794. Treated poles purchased in 1925 amounted to 1,768,522 or approximately 54 per cent of the total. No attempt

was made to obtain reports of poles purchased by the small rural telephone lines, of which there are approximately 50,000 in the United States.

The "Wedding of Rails" Celebrated

The 50th anniversary of the completion of the first railroad connecting Los Angeles, Cal., with the outside world and with San Francisco, was observed on September 5 at Lang, by a celebration sponsored by the Los Angeles Chamber of Commerce. Several thousand persons witnessed Mayor James Rolph, Jr., of San Francisco and Mayor G. E. Cryer of Los Angeles, shake hands across the pilots of two Southern Pacific locomotives while William H. Crocker, vice-president of the Sierra Railway of California, and a son of Colonel Charles Crocker, president of the Southern Pacific in 1876, drove a golden spike commemorating the event, and repeating the act of his father who drove a golden spike at Lang, on September 5, 1876, in a celebra-



Mayors Shake Hands; Driving of Golden Spike

tion of the completion of the Southern Pacific line from San Francisco and Sacramento to Los Angeles. During the past 50 years the 1,264 miles of railroad which the Southern Pacific operated in the state in 1876 has increased to 4,149 miles.

An historic old Southern Pacific train was run from Los Angeles to Lang, 42 miles north, carrying Mayor Cryer, and a party of more than 200, made up of old pioneer settlers, railroad men and members of the Chamber of Commerce. This train was met at Lang by a modern train carrying a similar delegation from San Francisco. When the two locomotives were stopped within a few feet of each other, the mayors of the two cities reached from pilot to pilot and shook hands, in congratulation on the growth and development brought to the cities by the railroad. Mr. Crocker then re-drove the golden spike at the same spot at which his father drove it a half century before. After the spike-driving there was a short program of speeches followed by a barbecue provided for all who attended the celebration.

Mechanical Division, A. R. A., Adds

New Subjects for Committee Work

Two new committees, one on Automotive Rolling Stock, and one on Lubrication of Cars and Locomotives, have been added to the list of standing committees which will serve the Mechanical Division of the American Railway Association until June, 1927, according to Circular No. DV-486 which gives the complete personnel of all committees for the coming year. The list of standing committees, together with their chairmen, is as follows:

- A—Arbitration—T. W. Demarest, general superintendent motive power, Northwest Region, Pennsylvania System, Chicago.
- A-1—Prices for Labor and Materials—A. E. Calkins, superintendent rolling stock, New York Central, New York.
- B—Autogenous and Electric Welding—J. T. Wallis, chief motive power, Pennsylvania System, Philadelphia, Pa.
- C—Car Construction—W. F. Kiesel, Jr., mechanical engineer, Pennsylvania System, Altoona, Pa.
- C-1—Brakes and Brake Equipment—G. H. Wood, general air brake instructor, Atchison, Topeka & Santa Fe, Topeka, Kan.
- C-2—Couplers and Draft Gears—R. L. Kleine, assistant chief motive power, Pennsylvania System, Philadelphia, Pa.
- D—Design of Shops and Engine Terminals—W. A. Callison, superintendent motive power, Chicago, Indianapolis & Louisville, Lafayette, Ind.

- E—Electric Rolling Stock—L. K. Silcox, general superintendent motive power, Chicago, Milwaukee & St. Paul, Chicago, Ill.
 F—Loading Rules—R. L. Kleine, assistant chief motive power, Pennsylvania System, Philadelphia, Pa.
 G—Locomotive and Car Lighting—W. E. Dunham, superintendent car department, Chicago & North Western, Chicago.
 H—Locomotive Design and Construction—H. T. Bentley, general superintendent motive power and machinery, Chicago & North Western, Chicago.
 I—Safety Appliances—C. E. Chambers, superintendent motive power and equipment, Central of New Jersey, Jersey City, N. J.
 J—Specifications and Tests for Materials—F. M. Waring, engineer of tests, Pennsylvania System, Altoona, Pa.
 K—Tank Cars—A. G. Trumbull, chief mechanical engineer, Erie, New York.
 L—Wheels—C. T. Ripley, chief mechanical engineer, Atchison, Topeka & Santa Fe, Chicago.
 M—Automotive Rolling Stock—C. E. Brooks, chief motive power, Canadian National, Montreal, Canada.
 N—Lubrication of Cars and Locomotives—W. O. Forman, mechanical superintendent, Boston & Maine, Boston, Mass.

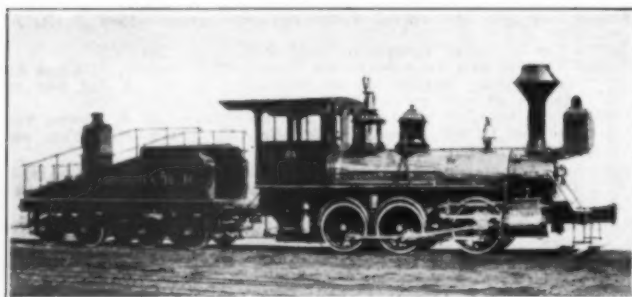
Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

- AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Next meeting, May 24, 1927, Mayflower Hotel, Washington, D. C. Exhibited by Air Brake Appliance Association.
 AIR BRAKE APPLIANCE ASSOCIATION.—F. Speer, 1021 Filbert St., Philadelphia, Pa. Meeting with Air Brake Association.
 AMERICAN ASSOCIATION OF ENGINEERS.—M. E. McIver, 63 E. Adams St., Chicago.
 AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—J. D. Gowin, 112 W. Adams St., Chicago.
 AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago. Next meeting, June 21-23, 1927, Mackinac Island, Mich.
 AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York. Next meeting, October 28-29, 1926, Hot Springs, Ark.
 AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Room 400, Union Station, St. Louis, Mo. Annual convention, June, 1927, San Francisco.
 AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—T. E. Welsh, Chicago, North Shore & Milwaukee, Highland, Ill. Next meeting, October 12-14, 1926, Detroit, Mich.
 AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 292 Madison Ave., New York. Annual convention, October 4-8, 1926, Cleveland, Ohio.
 AMERICAN RAILROAD MASTER TINNERS' COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borchardt, 202 North Hamlin Ave., Chicago, Ill.
 AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y. Annual meeting, November 17, 1926.
 Division I.—Operating—J. C. Caviston, 30 Vesey St., New York.
 Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill. Annual convention, May 10-14, 1927, Memphis, Tenn.
 Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York.
 Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y.
 Safety Section.—J. C. Caviston, 30 Vesey St., New York. Next meeting, April 19-21, Chicago.
 Telegraph and Telephone Section (including former activities of the Association of Railroad Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York.
 Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago, Ill.
 Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.
 Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual convention, March 8-10, 1927, Chicago. Exhibit by National Railway Appliances Association, March 7-10.
 Construction and Maintenance Section.—E. H. Fritch. Next meeting, March 8-10, 1927, Chicago.
 Electrical Section.—E. H. Fritch.
 Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York, N. Y.
 Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Exhibit by Railway Supply Manufacturers' Association.
 Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual convention, 1927, Louisville, Ky.
 Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y. Exhibit by Railway Supply Manufacturers' Association.
 Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill.
 Car Service Division.—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.
 AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Annual convention, October 12-14, 1926, Richmond, Va. Exhibit by Bridge and Building Supply Men's Association.
 AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—H. W. Byerly, General Immigration Agent, Northern Pacific, St. Paul, Minn. Semi-annual meeting, December 2-3, 1926, Chicago.
 AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railway Association Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Next annual convention, March 8-10, 1927, Chicago. Exhibit by National Railway Appliances Association, March 7-10.
 AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.—(See American Railway Association, Division V.)
 AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.
 AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 1319 21 F St., N. W., Washington, D. C.
 AMERICAN SOCIETY FOR STEEL TREATING.—W. H. Eisenman, 4600 Prospect Ave., Cleveland, Ohio.
 AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, 1315 Spruce St., Philadelphia, Pa.
 AMERICAN SOCIETY OF CIVIL ENGINEERS.—George T. Seabury, 29 W. 39th St., New York. Regular meetings 1st and 3rd Wednesday in month, except July and August, 33 W. 39th St., New York.
 AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, Associate Mechanical Editor, *Railway Age*, 30 Church St., New York.
 AMERICAN TRAIN DISPATCHERS' ASSOCIATION.—C. L. Darling, 10 East Huron St., Chicago, Ill. Biennial convention, July 18, 1927.
 AMERICAN WOOD PRESERVERS' ASSOCIATION.—E. J. Stocking, 111 West Washington St., Chicago. Annual meeting, January 25-27, 1927, Nashville, Tenn.
 ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual convention, 1927, New Orleans, La.
 ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 413, C. & N. W. Station, Chicago. Annual meeting, October 26-29, 1926, Hotel Sherman, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.
 ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th and H Sts., N. W., Washington, D. C.
 ASSOCIATION OF RAILWAY SUPPLY MEN.—C. O. Jenista, Barco Mfg. Co., 1801 Winnemac Ave., Chicago. Meeting with International Railway General Foremen's Association.
 ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.—(See American Railway Association, Division I.)
 ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—(See American Railway Association, Division II.)
 BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—Fred M. Condit, Fairbanks, Morse & Co., Chicago. Meeting with American Railway Bridge and Building Association, October 12-14, Richmond, Va.
 CANADIAN RAILWAY CLUB.—C. R. Crook, 129 Charron St., Montreal, Que.
 CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.
 CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, 514 East Eighth St., Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth St., Los Angeles.
 CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—F. G. Wiegman, 721 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.
 CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday each month, except June, July, August, Hotel Statler, Buffalo, N. Y.
 CHICAGO CLAIM CONFERENCE. Personal Injury Section.—F. L. Johnson, Chicago & Alton R. R., 340 Harrison St., Chicago. Meets 12:30 p. m., first Monday each month, Sherman Hotel, Chicago.
 CINCINNATI RAILWAY CLUB.—D. R. Boyd, 811 Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.
 CLEVELAND STEAM RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, except July, August, September, Hotel Hollenden, Cleveland.
 EASTERN RAILROAD ASSOCIATION.—E. N. Bessling, 614 F St., N. W., Washington, D. C.
 FREIGHT CLAIM ASSOCIATION.—(See American Railway Association, Division VII.)
 INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Next convention, 1927, Buffalo, N. Y. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.
 INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.—W. R. Walsh, Ewald Iron Co., Louisville, Ky.
 INTERNATIONAL RAILWAY CONGRESS.—Office of Permanent Commission of the Association, 74 rue du Progres, Brussels, Belgium. General secretary, P. Ghilain. Next session of the Congress, Spain, 1930.
 INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. B. Hutchison, 1809 Capitol Ave., Omaha, Neb. Annual convention, May 10-13, 1927, Hotel Sherman, Chicago. Exhibit by International Railway Supply Men's Association.
 INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn.
 INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.—W. H. Harris, 343 S. Dearborn St., Chicago. Earl E. Thulin, assistant secretary, 715 Peoples Gas Bldg., Chicago. Meets with International Railway Fuel Association.
 MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 26 Cortlandt St., New York. Next annual convention, Chicago.
 MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION.—(See A. R. A., Div. V.)
 MASTER CAR BUILDERS' ASSOCIATION.—(See A. R. A., Div. V.)
 MOBILE TRAFFIC AND TRANSPORTATION CLUB.—T. C. Schley, 71 Conti St., Mobile, Ala. Regular dinner meetings 6 p. m., on 2nd and 4th Monday of each month, Cawthon Vineyard, Mobile, Ala.
 NATIONAL ASSOCIATION OF RAILROAD TIE PRODUCERS.—E. A. Morse, vice-president, Potosi Tie & Lumber Co., St. Louis, Mo. Next convention, January 27 and 28, 1927, Nashville, Tenn.
 NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York. Annual convention, November 9, 1926, Asheville, N. C.
 NATIONAL FOREIGN TRADE COUNCIL.—O. K. Davis, 1 Hanover Square, New York.
 NATIONAL HIGHWAY TRAFFIC ASSOCIATION.—Elmer Thompson, 12 East 53rd St., New York.
 NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, 845 South Wabash Ave., Chicago. Annual exhibition, March 7-10, 1927, at convention of American Railway Engineering Association.
 NATIONAL SAFETY COUNCIL.—Steam Railroad Section: E. R. Cott, Safety

- Agent, Hocking Valley Ry., Columbus, Ohio. Annual Congress, October 25, Detroit, Mich.
- NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.
- NEW YORK RAILROAD CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August.
- PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2d Thursday in month, alternately in San Francisco and Oakland.
- PURCHASES AND STORES DIVISION.—(See American Railway Association, Division VI.)
- RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, 1116 Woodward Building, Washington, D. C. Annual meeting, June, 1927, Denver, Colo.
- RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 1406 Packard Bldg., Philadelphia, Pa. Annual meeting, November, 1926, Hotel Commodore, New York.
- RAILWAY CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, Belt Railway of Chicago, Polk and Dearborn Sts., Chicago. Supply-men's Association.—B. S. Johnson, W. H. Miner, Inc., Rookery Bldg., Chicago.
- RAILWAY CAR MANUFACTURERS' ASSOCIATION.—W. C. Tabbert, 61 Broadway, New York.
- RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.
- RAILWAY DEVELOPMENT ASSOCIATION.—(See Am. Ry. Development Assn.)
- RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago. Annual meeting with Association of Railway Electrical Engineers, October 27-30, Chicago.
- RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—F. W. Venton, Crane Co., 836 S. Michigan Ave., Chicago. Meeting with Traveling Engineers' Association.
- RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 12-14, 1926, New Orleans, La.
- RAILWAY REAL ESTATE ASSOCIATION.—R. H. Morrison, C. & O. Ry., Richmond, Va.
- RAILWAY SIGNAL ASSOCIATION.—(See A. R. A., Division IV., Signal Section.)
- RAILWAY STOREKEEPERS' ASSOCIATION.—(See A. R. A., Division VI.)
- RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division and Purchases and Stores Division, A. R. A.
- RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.
- RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, Commercial Trust Bldg., Philadelphia, Pa.
- ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Exhibit by Track Supply Association.
- ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.
- SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, West Nyack (Rockland Co.), N. Y. Meeting with American Railway Association, Signal Section.
- SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.—Clyde Kimball, Inman Shops, Atlanta, Ga. Meets semi-annually.
- SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.
- SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A. B. & A. Ry., Atlanta, Ga.
- SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—W. R. Mau, Vanadium-Alloys Steel Co., 1440 W. Lake St., Chicago.
- TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association.
- TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, Gen. Supt. R. S., New York Central, Buffalo, N. Y. Exhibit by Railway Equipment Manufacturers' Association.
- WESTERN RAILWAY CLUB.—Bruce V. Crandall, 189 West Madison St., Chicago. Regular meetings, 3rd Monday each month, except June, July and August.
- WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, 1735 Monadnock Block, Chicago, Ill.

THE LOS ANGELES TRANSPORTATION CLUB and the Women's Traffic Club of Los Angeles held their annual joint picnic on Saturday, September 25, at the Mailbu Country Club.



An Old Rogers Built Switcher

Traffic News

The Atlantic States Shippers' Advisory Board will hold its next meeting at Philadelphia on October 14.

The Southern Pacific has opened a ticket office and travel bureau in the Subway Terminal building at Los Angeles, Cal.

The Panhandle & Santa Fe (a subsidiary of the Atchison, Topeka & Santa Fe) began operations on September 30 on the newly constructed line extending from Panhandle, Tex., to Isom, a distance of 28 miles, as a part of its Plains division. This line serves the new oil territory north of Amarillo.

The Southern Railway is now using its own passenger station in Anniston, Ala., and from 10 to 30 minutes has been cut from the time of passenger trains between Atlanta and Birmingham, this being accomplished by a discontinuance of the run of 2.8 miles to the Union Station and back through a congested industrial district, which heretofore has been necessary.

The Denver & Rio Grande Western has issued a folder which graphically illustrates the route of the "Panoramic Special" through the Colorado-Utah Rockies, showing the points of interest, the portion of the trip completed in daylight and that part in the night. Another folder issued by this company describes the three-cylinder locomotives and the lounge-observation cars equipped with searchlights.

The Pennsylvania, in conjunction with the Wabash, has established through sleeping car and coach service from Louisville, Ky., and Indianapolis, Ind., to Toledo, Ohio, and Detroit, Mich. Cars will leave Louisville at 6:35 p. m., and Indianapolis at 10:15 p. m., arriving at Detroit at 8:15 the next morning. Returning, leave Detroit at 11:30 p. m., arriving at Indianapolis at 7:10 a. m., and Louisville at 11:25 a. m.

Claim Agents at Memphis October 20

A joint meeting of the Central, Southeastern and Southwestern Claim Conferences will be held at the Hotel Peabody, Memphis, Tenn., on October 20 and 21. The morning of the first day will be devoted to separate meetings of the three conferences at which their regular dockets will be considered. In the afternoon there will be a joint meeting of the three conferences and committees of the Freight Claim Division, American Railway Association; with the Chamber of Commerce, the Memphis Freight Bureau, the Traffic Club and other interested commercial organizations. On the morning of the second day a joint meeting of the three Claim Conferences will consider matters principally of interest to the membership of those conferences. A prevention meeting will be held on the afternoon of the second day and will be participated in by all railroad men interested in the reduction of freight loss and damage. The subjects to be considered on the morning of the second day include interline relationships, uniformity in claim payments, the recognition of a 50 per cent bunker capacity as the determining liability, and the confidential exchange of information between heads of freight claim departments relative to fraudulent claims. The prevention meeting will discuss the present status of freight loss and damage, carload damage, and loss of entire packages.

Prosecutions for Failure to Cancel Tariffs Promptly

At the request of the Interstate Commerce Commission the Department of Justice has instructed the United States attorneys of the eastern district of Virginia and the district of Indiana to institute penalty suits against the Chesapeake & Ohio and the Cincinnati, Indianapolis & Western to collect forfeitures for alleged failure to comply with an order issued by the commission directing the cancellation of tariffs proposing increases in certain freight rates which had been protested against and which the commission after hearing had found not justified.

The commission had specified a date for the cancellation of the tariffs and it is stated that the Chesapeake & Ohio failed and neglected to obey the order for a period of 24 days and the

Cincinnati, Indianapolis & Western for a period of 59 days. The Interstate Commerce Act provides a penalty of \$5,000 for each day's disobedience of such an order but the government is claiming the forfeiture for only one day in these cases.

In requesting the Department of Justice to bring these suits, the department's announcement to the press said, the Interstate Commerce Commission stated that "it appears necessary to invoke the penalty provisions of the act applicable in such cases, in order to effect a proper and prompt compliance with its orders."

Freight Claim Payments Reduced

Loss and damage payments as reported by the Class 1 carriers of the United States and Canada for the first six months of 1926 amounted to \$19,195,436 as compared with \$20,344,568 for the same period of 1925, or a decrease of 5.6 per cent. During this same period car loadings increased from 24,328,490 in 1925 to 25,036,464 in 1926 or 2.9 per cent.

Great Lakes Advisory Board Meets

The Great Lakes Regional Advisory Board held its 16th regular meeting at Niagara Falls, N. Y., on September 22. The railroads announced that car surpluses have been practically wiped out, and that conservation of cars should now be carefully looked after in all directions. A. P. Stevens, district manager, A. R. A., Detroit, appealed for earlier release of refrigerator cars. The campaign committee reported the accession of 168 new members, all of them shippers of freight in car load quantities. The commodity committees almost uniformly reported healthy conditions. Omitting such of these reports as indicate no important change, the following may be noted: agriculture and general machinery, conditions especially good; coal moved to Lake Erie ports up to September 1, totaled about 2,000,000 tons above the same period last year; the farmers' committee reported the yield of fruit below normal, but peaches are of better quality than in previous years. In Michigan the stock of old hay on hand is the lowest in years. The furniture manufacturers of Grand Rapids are carrying out a considerable program of expansion. The Michigan apple crop is expected to be heavier than last year. The movement of sand and gravel has been 22 per cent greater than last year.

Pennsylvania Appoints Freight Agents in Europe

The Pennsylvania announces the completion of arrangements for the establishment of freight agencies in the principal cities of Europe to begin business on November 1. Arrangements for co-ordinating with the company's traffic organization in the United States are in the hands of E. S. Neilson, general foreign freight agent at Philadelphia.

The firms which have been designated as agents, with definition of their respective territories, are as follows: W. Wingate & Johnson, Ltd., London, for England, Ireland, Scotland and Wales; the Société Française De Transport Gondrand Freres, Paris, all business in France; the Société Anonyme Internationale De Transport Gondrand Freres, Basle, for Switzerland; the Società Nazionale Di Trasporti Fratelli Gondrand, Milan, for Italian territory; Herfurth & Company, Antwerp, for Belgium; and Schenker & Company, Hamburg, Germany, will represent the Pennsylvania in Germany, Holland, the Baltic States, Poland, Russia, Austria, Czecho-Slovakia, the Balkans and Turkey.

The newly appointed general agents will be equipped to issue through bills of lading and furnish full information as to the company's service and facilities. The railroad company will assign to each agency a representative trained in American railroad traffic work and thoroughly familiar with rates, routings and all other transportation regulations.

Grape Growers' Agency Recommended

A committee of seven, representing the grape growers of California, on September 23, recommended the formation of a co-operative service agency for the purpose of improving the grape industry, and that the grape plan which is now in operation be continued for the season of 1927.

The recommendation was made at a meeting at San Francisco of representatives of the growers, the shippers and the bankers

of the Pacific Coast Transportation Board. The committee's recommendation provides:

(1) That the grape-car plan which is now in operation be continued for the season of 1927, provided that the policies and provisions of the plan shall be reviewed by the committee of 21 prior to March 1, 1927, and the terms of the plan for 1927 be concurred in by the committee of 21.

(2) That a committee of seven, a majority of whom shall be from the growers' committee, be appointed for the purpose of developing a plan for a service agency for the purpose of improving the grape industry through the standardization of the product, the exchange of information on grape movements, prices and other points of importance in the development of a consumers' demand for grapes.

(3) That a committee of four—one grower, one shipper, one banker and one representative of railroads—be appointed to consult with various government agencies and other experts in gathering all available information for grape distribution.

Freight Commodity Statistics

The Interstate Commerce Commission has issued a statement showing by districts the freight tonnage transported by Class I steam railways for the quarter ended June 30, 1926.

The table shows by general groups the tonnage transported with the figures for the corresponding period in 1925, also totals for the periods January 1 to June 30, 1926 and 1925, for the Class I roads as a whole:

Classes of commodities	Number of tons originated		Per cent of increase 1926 over 1925
	Quarter ended June 30, 1926	Quarter ended June 30, 1925	
Products of agriculture.....	19,586,463	18,078,420	8.34
Animals and products.....	6,076,657	6,046,218	.50
Products of mines.....	181,962,780	168,292,854	8.12
Products of forests.....	27,909,472	28,105,385	*.70
Manufactures and miscellaneous..	77,922,252	73,170,554	6.49
All L.C.L. freight.....	10,046,533	10,091,985	*.45
Total	323,504,157	303,785,416	6.49
Total tons carried			
Products of agriculture.....	43,190,493	39,434,203	9.53
Animals and products.....	11,220,811	10,861,217	3.31
Products of mines.....	313,201,807	289,484,693	8.19
Products of forests.....	53,323,303	55,273,598	*3.53
Manufactures and miscellaneous..	151,090,663	141,702,453	6.63
All L.C.L. freight.....	17,330,243	16,762,310	3.39
Total	589,357,320	553,518,474	6.48
Classes of commodities	Number of tons originated—Six months		Per cent of increase 1926 over 1925
	Six months ended June 30, 1926	Six months ended June 30, 1925	
Products of agriculture.....	44,067,857	43,116,184	2.07
Animals and products.....	12,330,170	12,542,942	*1.70
Products of mines.....	327,552,867	306,471,443	6.88
Products of forests.....	55,101,706	57,168,463	*3.62
Manufactures and miscellaneous..	145,818,412	138,193,387	5.52
All L.C.L. freight.....	19,527,607	19,757,168	*1.16
Total	604,338,619	577,249,587	4.69
Total tons carried			
Products of agriculture.....	94,406,870	91,212,301	3.50
Animals and products.....	22,360,271	22,150,821	.95
Products of mines.....	590,654,346	547,098,244	7.96
Products of forests.....	103,847,389	109,821,787	*5.44
Manufactures and miscellaneous..	282,472,116	267,181,450	5.73
All L.C.L. freight.....	33,468,594	32,795,165	2.05
Total	1,127,209,586	1,070,259,768	5.32

*Decrease.

Motor Transport News

Baltimore & Ohio train connection motor coaches of the downtown route via Liberty street ferry, New York, now stop at Wanamaker's department store, Ninth street and Fourth avenue, to receive and discharge passengers, this stop replacing that heretofore scheduled at Union square, Fourteenth street.

The Interstate Commerce Commission has postponed the final date for receiving replies to its questionnaire in the motor transport investigation from September 20 to October 15. Following the receipt of the last replies, the data will be tabulated and will be made available for the consideration of the commission at the final hearing in the investigation which will be held in Washington on October 25.

Commission and Court News

Interstate Commerce Commission

Baltimore Asks Increased Differential

The Baltimore Chamber of Commerce has filed a complaint with the Interstate Commerce Commission asking the establishment of an increased differential on export and import traffic under the rates via New York. In place of the present differential of 3 cents per 100 pounds on traffic other than grain and of 1½ cents on export grain it asks a differential of 6 cents under the New York rates, and on ex-lake grain it asks 1½ cents in place of the present differential of ½ cent.

State Commissions

A hearing on the restriction of the length of freight trains, as asked for by the Railway Brotherhoods, will be held before the Kansas Public Service Commission on November 16. The question of long freight trains has been before the Kansas legislature for several years.

Personnel of Commissions

Frank L. Smith, chairman of the Illinois Commerce Commission, resigned on September 1 to become a candidate for United States senator.

Thorne A. Browne, chairman of the Nebraska State Railway Commission, has resigned to become industrial commissioner of the Omaha (Neb.) Chamber of Commerce.

Cicero J. Lindly, vice-chairman of the Illinois Commerce Commission, died at his home in Greenville, Ill., on September 23, following a stroke of apoplexy early in the summer. P. H. Monyihan has been named acting chairman of the commission.

Court News

Attempting to Board a Train with Trap Door Closed Held Negligence

The Circuit Court of Appeals, Eighth Circuit, holds that undertaking to board a train moving out of a station with the trap door closed down over the steps is negligence per se in the absence of circumstances which excuse the act.—*Palen v. Wheelock*, 13 F. (2d), 34.

Owner Must Prove Defect in Stock Fences Caused Death of Animals

The Texas Court of Civil Appeals holds in an action for the value of mules killed on the track that where the evidence shows that a track is enclosed by a good fence, except in one or two defective places, it must appear that the defective condition was the proximate cause of the stock entering upon the right of way. When a right of way runs through land it is the duty of the owner, not of the railroad, to keep the stock fence gates closed.—*Texas & Pacific v. Cook* (Tex. Civ. App.), 279 S. W. 292.

Penalty for Failure to Adjust Claim for Damage

The North Carolina Supreme Court holds that the statutory penalty for failure to adjust a claim for loss of or damage to an intrastate shipment within 90 days after filing is not recoverable where the plaintiff does not prove when he filed the claim. The penalty is also avoided unless the plaintiff recovers the full amount of his claim.—*Watkins v. Am. Ex. Co.* (N. C.), 130 S. E. 305.

Foreign Railway News

East African Railway Extension Urged

At an unofficial meeting of representatives of East African territories held this month at Victoria Falls, it was urged that a railway be built from Dodoma, in Tanganyika, to Fife in northeast Rhodesia, to help forward the development of the territory between these two points. The plan was said to be backed by East African opinion in general, according to Lord Delamere, who presided at the meeting. He urged that the railway should not be regarded purely on an investment basis, and therefore, the Imperial Treasury should finance the project free of interest. To support the proposal, Lord Delamere cited the rapid development of Kenya, following the construction of the Kenya main line by the government, to control the headwaters of the Nile.

New Zealand Railways Separated from Rest of Government Administration

The New Zealand Government Railways have been separated as to their financial operations from the consolidated funds of the New Zealand government, and placed under what is known as the "working railways account," according to Commerce Reports. The railways account is used for operation, maintenance, and reinvestment of unused moneys, in the same manner as is practiced on a privately-operated railroad. Under the old system, no definite accounting could be made to show the profit or loss of the railways to the dominion. The new system makes the railways responsible for the earning of all money expended, including pension payments and interest on fixed capital. Temporary loans from the consolidated fund are available, however, in case of emergency. All services made by the railways to other government departments and as operator for the state of non-paying development lines are handled on a cash basis, and a revenue for this is collected from the departments and government. The railways, however, have not been relieved of parliamentary control. Estimates are still handled by Parliament, and appropriations made annually for expenditures.

Financial Position of Leading Spanish Railways

The three principal Spanish railways enjoyed a less favorable financial position during 1925 than in 1924, according to Charles H. Cunningham, commercial attaché at Madrid, in Commerce Reports. The total gross earnings of the Madrid, Zaragoza & Alicante in 1925, were 294,046,419 pesetas, or 5,023,835 pesetas more than in 1924; but net earnings declined by 1,180,290 pesetas to 18,455,703 pesetas, owing to an advance of 3,284,572 pesetas in total charges. A dividend of 28 pesetas per share, free of taxes, was ordered paid, as compared with a dividend of 22 pesetas in 1924. The total revenue paid by the company to the state was 58,647,722 pesetas which represents 16,010 per kilometer and 118 pesetas per share. Equipment secured during the year included 25 locomotives, 6 express cars, 175 passenger cars and 406 freight cars.

The annual report of the Norte for the year 1925, shows that, in spite of the maintenance of last year's dividend and the deduction of an increase in surplus, the over-all financial condition is inferior to that of 1924. The gross earned by the company was 120,774,976 pesetas as compared with 119,644,638 pesetas in 1924, but the net in 1925 was 14,784,197 pesetas as compared with 16,530,250 pesetas the year previous. The increase in gross income is attributed primarily to an increase in freight business. The company bought 29 locomotives, 56 passenger cars, and 1,122 freight cars. The budget for the coming fiscal year provides for the purchase of 40 locomotives, 40 tenders, 76 passenger cars, 300 box cars, and 2,900 flat cars.

Earnings of the Andaluces for 1925 totaled 60,673,289 pesetas, or 1,640,000 pesetas less than 1924. The net of the company, after all charges had been deducted, was 2,282,583 pesetas as against 6,230,000 in 1924. The company paid 14,000,000 pesetas, or 23 per cent of its total income, in taxes to the government. The company has recently received 400 freight cars, 25 passenger cars, and 40 express cars built in Belgium.

British Built Locomotives for**Chile Show American Influence**

Two British built Garratt-type locomotives, combining features of both British and American practices in locomotive building, have been placed in operation on the Nitrate Railways at Iquique, Chile, according to a report from Harry Campbell, American Consul at Iquique, in Commerce Reports.

The locomotives were built in Manchester, England, by Beyer, Peacock & Co., and are said to be the most powerful of the type ever built. They were constructed in accordance with specifications submitted by the locomotive superintendent of the Nitrate Railways, for the particular work of hauling freight trains from Iquique to Carpas, a distance of about 20 miles, and over a gradient as great as 3.9 per cent.

The more important American features of the locomotives are the bar type of frame, cylinders cast integrally with half of the frame stay, crosshead guide bars of the double American type above the piston rod, grease lubrication in accordance with the latest American practice, spring rigging placed above the driving boxes, boilers with steel fire boxes, stayed with iron staybolts, American type combined feed water heaters and pumps and water-purifying apparatus, connecting rod back end bearings of the American floating type, and air brakes of American design. A third locomotive of the same type is under construction in Manchester, and will be delivered in two or three months.

Australian Railways Lose £833,008**Year—Bus Competition Growing**

After meeting interest charges and other expenses, the Australian railways suffered a loss of £833,008 during the fiscal year ended June 30, 1925, according to a statement made by the Commonwealth statistician and reported by Trade Commissioner E. G. Babbitt, Sydney, and Assistant Trade Commissioner J. B. Foster, Melbourne, in Commerce Reports. The loss was 47 per cent less than that in 1923-24. On June 30, 1925, there were 27,688 miles of railway open for traffic, of which 24,844 miles were government owned. Freight carried by the railways increased 2,290,000 tons over 1923-24, the total carried being approximately 38,000,000 tons. While freight tonnage increased, the number of passengers decreased by 1,560,000, a total of 370,350,000 passengers being carried during the year. The decrease is laid to motor-bus competition, particularly in Victoria.

The South Australian railways showed a net profit of £58,000 according to a report for the fiscal year of 1924-25, in spite of an increase in wages and the increased price of coal. Motor-bus competition is being keenly felt, according to the report, so severely in some localities that the railways have inaugurated motor-bus service of their own. The train-control system (i. e. dispatching) introduced in 1924, is reported to have greatly facilitated the handling of traffic, and is now being extended to many lines.

Revenue on the Victorian is still falling, showing a decrease of £147,482 to June 14, of the fiscal year ended June 30, 1926, in comparison with the corresponding period of the fiscal year 1924-25. The decrease is due to a decrease in freight carried. Proposed increases in freight rates have been postponed until the deficit for the financial year ended June 30, 1926, has been ascertained.

Miscellaneous

The Department of Commerce has received the following reports from its agents in various parts of the world:

New South Wales may adopt all-steel passenger cars and American automatic couplers as result of recent serious railway accident causing 26 deaths.

Receipts of Bulgarian National Railways diminished during the fiscal year 1925-26, ended March 31, as compared with the amount obtained during the preceding year. The 1925-26 total was 889,800,000 leva, against 923,500,000 leva for 1924-25. Freight transported decreased but the number of passengers carried increased. (The leva is exchangeable at about \$0.0073.)

The Pacific Railway of Costa Rica will be electrified, a contract having been signed between the Costa Rican government and the Allgemeine Elektrizitaets Gesellschaft of Berlin. The railway runs from San Jose to the Pacific port of Puntarenas.

Equipment and Supplies**Locomotives**

THE BELT RAILWAY OF CHICAGO has ordered five eight-wheel switching locomotives from the Baldwin Locomotive Works.

THE ARGENTINE STATE RAILWAYS have ordered 20 Santa Fe type locomotives from the Baldwin Locomotive Works.

THE LOUISVILLE & NASHVILLE has authorized the purchase of 18 Mikado type locomotives.

THE NORWOOD & ST. LAWRENCE has ordered one Mogul type locomotive from the Baldwin Locomotive Works.

THE MUKDEN HAILUNG (China) is inquiring through the builders for two locomotives for passenger service and four locomotives for switching service.

THE CENTRAL OF BRAZIL has ordered eight Mikado type locomotives and another lot of 10 Mikado type locomotives, and 10 Pacific type locomotives, from the Baldwin Locomotive Works. The Pacific type locomotives will have three cylinders.

Freight Cars

THE BURLINGTON REFRIGERATOR EXPRESS COMPANY is inquiring for 200 steel underframes and 200 center sills.

THE CHICAGO, MILWAUKEE & ST. PAUL is inquiring for 1,000 automobile cars and from 500 to 1,000 stock cars.

THE NORFOLK SOUTHERN is inquiring for 100 composite gondola cars of 50 tons' capacity.

THE WABASH is building 40 caboose cars in its own shops, instead of 24 as announced in the *Railway Age* of September 25.

THE LOUISVILLE & NASHVILLE has authorized the purchase of 1,000 steel gondola cars, 250 steel underframe flat cars and 250 automobile cars.

Passenger Cars

THE CONSOLIDATED RAILROADS OF CUBA have ordered six gasoline rail motor cars from the J. G. Brill Company.

THE NEW YORK, CHICAGO & ST. LOUIS is inquiring for one gas-electric passenger car.

THE LOUISVILLE & NASHVILLE has authorized the purchase of 22 passenger cars, two combination passenger and baggage cars, two dining cars and two postal cars.

Iron and Steel

THE NORFOLK & WESTERN has ordered 425 tons of steel from the Virginia Bridge & Iron Company.

THE FLORIDA EAST COAST has ordered 12,000 tons of rail from the Tennessee, Coal, Iron & Railroad Company.

THE TEXAS & PACIFIC has ordered 14,000 tons of rail from the Tennessee Coal, Iron & Railroad Company.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS has ordered 5,000 tons of rail from the Tennessee Coal, Iron & Railroad Company.

THE ERIE has ordered 225 tons of steel from the Phoenix Bridge Company and 300 tons from the American Bridge Company.

THE LOUISVILLE & NASHVILLE is inquiring for 1,500 kegs of spikes, 3,500 kegs of track bolts and 25,000 pairs of angle bars. This company has authorized the purchase of 67,600 tons of rail.

THE PENNSYLVANIA has ordered 125 tons of steel from the American Bridge Company and 900 tons from the Belmont Iron Works; the latter is for its electrification work to Wilmington.

THE NEW YORK CENTRAL LINES will receive bids until 12 o'clock noon, October 7, for open hearth standard steel rails, with splice bars, required by the New York Central Lines. This calls for a total of about 230,000 tons.

Machinery and Tools

THE DETROIT STREET RAILWAYS have ordered a car wheel lathe from the Niles-Bement-Pond Company.

THE MISSOURI PACIFIC has ordered a side head boring mill, a 1,500-lb. steam hammer and a 100-ton bushing press from the Niles-Bement-Pond Company.

THE WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY has ordered a 36-in. by 44-in. side head boring mill from the Niles-Bement-Pond Company.

THE NEW YORK CENTRAL is inquiring for two 20-ton and two 25-ton locomotive cranes. The New York Central has ordered a 36-in. by 36-in. by 10-ft. planer and a 44-in. heavy boring and turning mill from the Niles-Bement-Pond Company.

Signaling

THE NORTHERN PACIFIC has ordered from the General Railway Signal Company an electric interlocking, 8 levers, for a drawbridge at Tacoma, Wash.

THE INTERBOROUGH RAPID TRANSIT COMPANY, New York City, has ordered from the Union Switch & Signal Company an electro-pneumatic interlocking, 67 levers, for Peartree avenue, on the Corona extension of its elevated line.

THE CHICAGO, MILWAUKEE & ST. PAUL has ordered from the Union Switch & Signal Company material for automatic train control, the Union 2-speed continuous inductive system, to be installed on its line, double track, between LaCrosse, Wis., and Portage, Wis., 105 miles. This section of road is already equipped with automatic block signals. It adjoins the section between Bridge Switch and Hastings, on which Union automatic train stops were installed last year. Equipment for 28 additional locomotives is included in the present order.



Exing Galloway

Passenger Train on Athens-Saloniki Line, Greece, Held Up by Locusts—Employees Sanding the Slippery Rails

Supply Trade News

The Marion Steam Shovel Company, Marion, O., is planning the construction of a factory branch and distributing plant, 45 ft. by 110 ft., at Kansas City, Mo., to cost approximately \$45,000.

The Davis Brake Beam Company, Pittsburgh, Pa., has discontinued its Roanoke, Va., office and future business in that territory will be taken care of by the general sales office at Pittsburgh.

Bruce Owens, who has been elected vice-president of the O'Malley Beare Valve Corporation, Chicago, as was announced in the *Railway Age* of September 25, was born in Maysville, Ky., on March 12, 1883. In 1901 he entered the employ of the J. W. Barrett Brass Foundry Company at St. Louis, Mo. This company was later taken over by the Hewitt Manufacturing Company, which later became a part of the Magnus Company, Inc. In 1910 he was appointed service engineer of the latter company and in 1917 was promoted to assistant to the vice-president. He held the latter position until February, 1922, when he was promoted to sales manager, which position he has held until his recent election.



Photo by Moffett
Bruce Owens

Col. Leonard S. Horner has resigned as vice-president and manager of sales of the Acme Wire Company, New Haven, Conn., and has been elected president of the Niles-Bement-Pond Company, New York, succeeding James K. Cullen, who has resigned to devote his entire time to his activities as president and general manager of the Niles Tool Works Company, Hamilton, O. Colonel Horner was born at Marshall, Va., on March 26, 1875. He attended the Bethel Military Academy and is a graduate in electrical engineering of Lehigh University, class of 1898. After his graduation he was employed by the American Telephone & Telegraph Company as construction engineer and was later electrical engineer and sales manager of the Crocker-Wheeler Company. He is now a director of the Crocker-Wheeler Company, the Acme Wire Company, and the Pratt & Whitney Aircraft Company of Hartford, Conn.; vice-president of the New Haven Chamber of Commerce; a counsellor of the United States Chamber of Commerce, and a member of the Board of Aviation. He served in the Spanish-American War with Troop A, New York Cavalry.



Col. L. S. Horner

During the World War he enlisted in the Signal Corps-Air Service Division, being commissioned major and put in charge of the manufacturing facilities and production of Liberty engines, airplanes, airplane machine guns and other airplane accessories. After serving in this capacity for eight months, he became a lieutenant-colonel and chief of staff to the commanding officer of aircraft production. Colonel Horner's efforts in the production of Liberty motors and airplanes resulted in his being cited by the British Government for meritorious service.

E. C. Sicardi, president of the Union Tank Car Company at New York, who retired recently after a service of about 36 years with that company, as was announced in the *Railway Age* of September 11, was born in 1871 at Brooklyn, N. Y. He was educated in the Brooklyn schools. Mr. Sicardi entered the service of the Union Tank Line, now the Union Tank Car Company, as a stenographer, and after serving in a number of different positions, he was appointed superintendent of car service and later, vice-president. About four years ago Mr. Sicardi was elected president of the company to succeed William A. Barstow, deceased. Mr. Sicardi served during the World War as vice-chairman of the Tank Car Committee of the National Petroleum War Service Committee, which committee was in charge of the transportation of petroleum in tank cars for the United States and the Allies. He is also a councilor of the American Petroleum Institute and a member of its Committee on Railroad Transportation.



F. C. Sicardi

R. E. Prussing, for many years district sales manager of the **Whiting Corporation** at Detroit, Mich., has taken up duties at the main office, Harvey, Ill. **W. R. Hans**, district manager at Buffalo, N. Y., succeeds Mr. Prussing at Detroit. Sales in the Buffalo territory will hereafter be handled by **C. G. Crewson**, **Arthur E. Smith** and associates (Industrial Equipment Company), 306 Jackson building, Buffalo.

George T. Marchmont, manager of the **Graybar Electric Company's** Richmond, Va., branch house has been appointed southern district manager, with headquarters at Atlanta, Ga., to succeed **Howard Hall**, who has been promoted to the staff of Frank A. Ketcham, executive vice-president at New York. Mr. Marchmont will have under his supervision the Graybar distributing houses at Atlanta, Birmingham, New Orleans, Savannah, Jacksonville, Miami and Tampa. **J. H. Pearson, Jr.**, manager of the branch at Charlotte, N. C., succeeds Mr. Marchmont as manager of the Richmond house and **Moorman C. Beckner** of the sales staff of the Graybar Richmond house succeeds Mr. Pearson at Charlotte. **E. E. Martin** has been appointed manager of the Syracuse, N. Y., branch to succeed **E. D. Towler**, who has been appointed assistant sales manager at New York.

Pullman Company's Annual Report

The annual report of the Pullman Company for the fiscal year ended July 31, 1926, shows gross revenues from the operations of sleeping and parlor cars amounting to \$90,831,274, which was the largest in the history of the company. Of this amount \$70,739,001 was spent in conducting the business and \$9,701,866 was paid to the railroads as their share of Pullman revenue, leaving as the net result of sleeping and parlor car operations for the year, the sum of \$10,390,406. This net income was equivalent to approximately 29 cents for each revenue passenger carried, 7 cents for each passenger carried 100 miles, or 0.07

cent per passenger mile, and \$3.28 per day for each car owned by the company. It represents a net return of not more than 5 per cent on a fair value of the properties used in conducting the carrier business of the company. Government securities and cash held in the treasury at the close of the year amounted to \$25,471,608. In addition, the holdings of other bonds, stock and equipment trust notes, exclusive of the stock of the Pullman Car & Manufacturing Corporation, had a book value of \$7,679,452, and a sound market value in excess of that amount, or a total value of more than \$34,000,000. During the year, a total of 36,231,488 revenue passengers was carried in Pullman cars which is an increase of 1,716,223 over the preceding year. These passengers traveled in the aggregate, during the year, 14,479,249,784 miles, an increase of 1,056,938,251 miles in the year, or an average distance of 400 miles per passenger, which is equivalent to an increase of 11 miles per passenger over the preceding year. The daily average of Pullman travel was 99,264, or an increase of 4,702 over the preceding 12 months. During the year, \$17,274,313 was expended for 546 new cars added to the equipment.

Supplies for the operation of cars cost \$2,273,030. Over four million pieces of linen were purchased, including 1,876,681 hand towels, 875,248 sheets and 976,834 pillow slips. The laundry bill for the year amounted to \$3,314,701, and materials used in car cleaning cost \$258,743.

In order to expedite repairs in maintenance and to reduce costs, a repair and maintenance shop is under construction at Atlanta, Ga., to cost approximately \$1,000,000 and the Calumet plant at Chicago is being extended and facilities improved at an expenditure of \$1,250,000.

A total of \$1,000,000 was appropriated as an addition to the pension reserve. The sum of \$205,368 was distributed in pensions during the year. In addition, under the death benefit plan the sum of \$212,236 was paid to widows and dependents of deceased employees. The income account for the Pullman Company for the year ending July 31, 1926, follows:

INCOME ACCOUNT, PULLMAN COMPANY		
	1926	1925
Gross revenue from cars.....	\$90,831,274	\$83,927,749
Expenses:		
Maintenance	20,272,079	
Conducting car operations.....	34,126,430	
General expenses	2,890,652	
Taxes	4,301,671	
Depreciation of cars.....	9,148,169	
	\$70,739,001	65,970,956
	\$20,092,273	\$17,956,793
Less: Amount paid to railroads as their share of Pullman revenue	9,701,867	8,575,388
Net income from sleeping car business for the year	\$10,390,406	\$9,381,405
Other income:		
From investments, etc.....	2,906,235	3,140,603
Dividends from Pullman Car & Manufacturing Corporation	2,999,970	3,249,968
Total net income for the year.....	\$16,296,611	\$15,771,976
Reserve for pensions, reserve for excess cost of replacement of cars and dividends declared.	12,749,894	12,738,872
Net surplus for the year.....	\$3,546,717	\$3,033,104

The report of the Pullman Car & Manufacturing Corporation shows net earnings of \$6,826,599 after all charges. Of these earnings the Pullman Company received as the sole stockholder the sum of \$2,999,970 as dividends which is at the rate of 6 per cent. The Pullman Company's business with the manufacturing corporation approximates about one-third of that company's output. The manufacturing corporation had in its treasury \$19,482,409 of cash government securities and \$2,868,155 of equipment trust notes and other securities which made a total of \$22,350,565.

Trade Publications

ACCIDENT PREVENTION.—"Accident Prevention on a Railroad" is the title of a booklet issued by the Metropolitan Life Insurance Company, 1 Madison avenue, New York. The report in this booklet contains the story of an accident-prevention survey carried out by the safety engineers of the Policyholders' Service Bureau for a Class I railroad—a group insurance policyholder of the Metropolitan Life Insurance Company. It illustrates the method used in making such a study and the type of information deemed essential. An outline of the recommendations made to the railroad company is also included.

Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company contemplates the construction of a passenger station at Claremont, Cal.

ATCHISON, TOPEKA & SANTA FE.—A contract has been awarded to Robert E. McKee, El Paso, Tex., for the construction of a one-story steam-operated powerhouse at Bakersfield, Cal., estimated to cost \$65,000.

ATCHISON, TOPEKA & SANTA FE.—Bids have been closed for the construction of two 20-ft. by 400-ft. poultry sheds at Chicago.

ATCHISON, TOPEKA & SANTA FE.—Bids will close on October 1 for the construction of an 8-stall reinforced concrete addition to the roundhouse at Clovis, N. M., including extension of 10 stalls and widening of 18 more.

BALTIMORE & OHIO.—This company has awarded a contract to Sheesley & Janney, Johnstown, Pa., for the construction of substructures for two bridges at Lester, Ohio, to cost approximately \$16,000.

CHICAGO & ALTON.—This company contemplates the construction of a subway for the state highway at Manchester, Ill., to cost \$28,000, a subway at Cicero avenue, Chicago, to cost \$195,000, a viaduct over the state highway east of Glasgow, Mo., to cost \$27,000, the rebuilding of a bridge over the drainage canal at Alton, Ill., to cost \$34,000, and rebuilding of a bridge west of Pearl, Ill., to cost \$30,000.

CHICAGO & EASTERN ILLINOIS.—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the construction of a 400-ton reinforced concrete coaling station in connection with the establishment of new engine facilities at Evansville, Ind.

CHICAGO & NORTH WESTERN.—Bids closed on September 28 for the construction of an 8-stall addition to a roundhouse at Chicago.

CHICAGO & NORTH WESTERN.—Plans have been prepared for the installation of a direct steaming smoke elimination system at the roundhouse at Chicago avenue and Halsted street, Chicago, and a contract for the installation of the steaming plant has been let to the Ogle Construction Company, Chicago. Including the construction of a storage building at the Crawford avenue shops and other changes incident to the installation, the total cost of the project is estimated at approximately \$175,000.

CHICAGO & NORTH WESTERN.—Bids are being received until October 4 for the construction of a 3-stall roundhouse at Benld, Ill. A contract for the construction of a 3-story office building at the Proviso, Ill., yard to house the freight yard organization has been awarded to the Ellington Miller Company, Chicago.

CHICAGO & NORTH WESTERN.—A contract has been let to James Stewart & Co., Chicago, for the construction of a 400,000-bu. reinforced concrete grain elevator at Green Bay, Wis., at an estimated cost of \$200,000. The elevator, which replaces one destroyed by fire, will be made up of ten circular storage bins.

CHICAGO, ROCK ISLAND & PACIFIC.—Bids closed on September 28 for the construction of a coaling station and cinder pit at Caldwell, Kan.

DELAWARE, LACKAWANNA & WESTERN.—This company has entered into an agreement with the City of Paterson, N. J., under which it will eliminate grade crossings, build a new passenger station and four-track its line through that municipality. The total cost of the work is estimated at \$1,000,000, in which the city will share.

ERIE.—This company has awarded a contract for 96 steel cargo doors for Pier No. 9, now under construction at Jersey City, to the Truscon Steel Company, Youngstown, O. A contract for the fire doors for the new freight pier has been awarded to the J. G. Wilson Company, New York.

GRAND TRUNK WESTERN.—In order to accommodate two steel car ferries now under construction at Manitowoc, Wis., this company is renewing 250 ft. of dock wall, building 400 ft. of new wall and constructing a second ferry slip at Milwaukee, Wis., at a total cost of \$135,000. The contract for the dock and slip has been awarded to Edward E. Gillen Company, Milwaukee, while company forces are constructing a 150 car storage yard adjoining these improvements.

GRAND TRUNK WESTERN.—Company forces are constructing a 400-car storage yard and industrial lead to serve automobile industries and a 72-car switching lead with the extension of ten tracks to increase the capacity of the latter yard from 525 to 1,500 cars at Pontiac, Mich. A contract for a portion of the grading work has been awarded to the Jones Contracting Company, Pontiac, Mich. The cost of both projects is estimated at \$255,000.

LOWELL & SOUTHERN.—This company has been authorized by the Interstate Commerce Commission to construct a railroad from Lowell, Ill., in a general southerly direction to a connection with the Chicago, Burlington & Quincy, at a point approximately 1 mile northwest of Leonore, Ill., a distance of 4 miles, at an estimated cost of \$98,250.

MISSOURI PACIFIC.—The Interstate Commerce Commission has authorized this company to construct an extension of its Hope-Nashville branch from its present terminus at Nashville, Ark., in a general northerly direction for a distance of 7½ miles, at a cost of \$193,000. Construction will probably start about November 1, 1926.

MISSOURI PACIFIC.—A contract has been awarded to the Sumner Sollitt Company, San Antonio, Tex., for the construction of a brick and stucco passenger station at Edinburg, Tex., and of a tile and stucco passenger station at Brownsville, Tex. The two stations, both to be constructed in mission style, will cost about \$66,000.

NORTHERN OKLAHOMA.—This company's application for permission to construct a railroad consisting of 11½ miles of main track and 4½ miles of spur track, from a point 3 miles west of Vinita, Okla., and extending north approximately 11 miles, has been denied by the Interstate Commerce Commission.

PENNSYLVANIA.—A contract has been let to the Ogle Construction Company, Chicago, for the construction of a 250-ton reinforced concrete and steel electrically operated coaling station at Conemaugh, Pa., which will serve nine tracks and will contain sanding facilities.

SAN BENITO & RIO GRANDE VALLEY.—Preliminary surveys are being made for a line from Fernando, Tex., to a point six miles east and from San Benito, Tex., to a point on the Rio Grande Railway, pending granting of permission for construction by the Interstate Commerce Commission.

SOUTHERN PACIFIC.—Bids closed on September 30 for the construction of a freight terminal and office building 600 ft. by 200 ft., at Dallas, Tex., estimated to cost \$1,500,000.

WINSTON-SALEM SOUTHBOUND.—A contract has been awarded to the Walden Construction Company, Roanoke, Va., for the realignment and elevation of three tracks between Southmont, N. C., and Highrock, about five miles.

MORE THAN 12,000 employees of the Chesapeake & Ohio and Hocking Valley and their families during the past summer enjoyed outings under the supervision of the railroad's departments of health and recreation. The first of the series of picnics along the system was held by the employees of the Chicago division at Lake Bruce, Ind. Employees of the Hocking Valley numbering 2,500, gathered at Cedar Point, O., for their outing. One of the largest outings in the series was held on the Huntington division, when 4,000 shopmen and members of their families gathered at Camden Park, Huntington, W. Va., for an all day outing. This number was exceeded only by the Richmond division where two picnics were held, both at Buckroe Beach, Va., by the shopmen and general office employees.

Railway Financial News

ATLANTIC COAST LINE.—Acquisition.—The Interstate Commerce Commission has made public a proposed report of Examiner Ralph R. Molster recommending a finding by the commission that the acquisition of control of the Columbia, Newberry & Laurens, by purchase of capital stock, will be in the public interest provided the present neutrality in handling traffic over the line of the latter company be continued and the line be maintained as an open route equally available to all connecting carriers.

BALTIMORE & OHIO.—Dividend Increased.—At a meeting of the board of directors on September 9, the directors declared the regular quarterly dividend of 1 per cent on the preferred stock and a quarterly dividend of 1½ per cent on the common stock, both payable December 1 to stockholders of record at the close of business on October 16. The 1½ per cent dividend on the common puts that stock on a 6 per cent annual basis. Dividends on this stock have been at the annual rate of 5 per cent since December 1, 1923. The latest dividend declaration restores the 6 per cent rate which the Baltimore & Ohio paid on its common stock from September, 1906, to March, 1914. The rate was reduced to 5 per cent in September, 1914, at which rate it was continued until March, 1918. Two per cent was declared in February, 1919, and then none thereafter until December 1, 1923, when the 5 per cent rate was resumed.

CHESAPEAKE & OHIO.—Statement of Minority Stockholder.—Ralph Neale, a member of the minority stockholders committee opposing the Van Sweringen Merger, has issued a statement declaring that the Chesapeake & Ohio is more valuable to its stockholders as an independent road than as a part of the proposed new system. The statement says in part:

"There have been some signs recently that some people are beginning to discover the value of the Chesapeake & Ohio although the price is based too frequently upon the terms of exchange value in the proposed Nickel Plate merger.

"The investing public should not forget, however, that the Chesapeake & Ohio is more valuable to its stockholders as an independent road, operated as such, than it would be to them in the proposed merger, measured by any offer so far made or even suggested.

"Careful and responsible estimates for 1926 are around \$25 per share on the common stock, and this does not include Chesapeake's 80 per cent equity in Hocking Valley's surplus earnings and is after deducting liberal maintenance expenses.

"These excellent earnings do not tell the whole story, for, if we add to them the amount that lies in the concealed earning power of the road, the rate earned on common will be amazing. By 'concealed earning power' I do not mean that it has been wilfully concealed by the operators of the road, but that the pending and much discussed Nickel Plate merger has delayed certain additions, betterments and improvements, the lack of which has retarded the development of Chesapeake & Ohio's business to the great disadvantage of the road and its stockholders."

CHICAGO & ALTON.—Interest.—The protective committee, of which Charles A. Peabody is chairman, has notified holders of Chicago & Alton 3 per cent refunding 50-year gold bonds that, pursuant to a court order, the receivers expect on October 1 to pay the interest due on that date. Depositors are instructed to present their certificates of deposit to the New York Trust Company or the Illinois Merchants' Trust Company of Chicago.

CHICAGO, MILWAUKEE & ST. PAUL.—To be sold November 22.—Federal Judge James A. Wilkerson in the District Court for Northern Illinois on September 28, announced the fixing of the upset price of the road at \$122,500,000 and ordered it sold at auction at Butte, Mont., on November 22. The buyer must agree to take over the \$154,481,500 bonds of the Chicago, Milwaukee & Puget Sound. This is a victory for the reorganization committee and represents defeat of the Jameson Bondholders' Protective Committee. The reorganization managers had asked for the fixing of an early date of sale and for the fixing of an upset price of not to exceed \$90,000,000. The Jameson committee, however, had asked for the fixing of a price of \$250,000,000 and for postponement.

Oral argument on these points was made before Judge Wilkerson at Chicago on September 27. A report of the hearing follows:

An upset price not to exceed \$90,000,000 and the fixing of an early date of sale of the system was requested by Robert T. Swain, of the

legal firm of Cravath, Henderson & de Gersdorf of New York, representing the reorganization managers and bondholders' committee.

Mr. Swain stated that he represented 20,000 individuals with \$158,000,000 in holdings. He pointed out that the Jameson committee, represented before Judge Wilkerson by former governor Nathan Miller of New York, appeared for only 70 individuals with holdings of only \$18,000,000 of the railroad's bonds.

Both Mr. Swain and Edwin L. Sunderland as counsel for the reorganization managers pointed out that the upset price of \$90,000,000 which they request is in sharp contrast to the upset price of \$250,000,000 for the St. Paul properties requested by the Jameson interests. They urged that if the latter figure were forced, it would result in a distribution to the non-assenting refunding bonds of the railroad company of approximately 85, as compared with their present market value of about 54½. It was further pointed out that, although the Jameson committee wants to force the reorganization managers to outbid this price, the committee itself has not expressed any willingness to bid such an amount.

Counsel for the majority bondholders further declared that Mr. Jameson's suggested upset price of \$250,000,000 would mean a quick profit of more than \$4,000,000 on the St. Paul bonds held by him and the Globe and Rutgers Fire Insurance Company, which he controls.

Of this \$4,000,000, more than \$1,500,000 would go to Mr. Jameson as his personal profit on the purchases of St. Paul bonds since the receivership. In this connection it was shown that of the \$14,000,000 of St. Paul bonds held by Mr. Jameson and his fire insurance company, more than \$9,000,000 were purchased either after the receivership or on the eve of the receivership at average prices little, if any, above the present market prices.

Counsel for the reorganization managers told the court that the bonds deposited under the reorganization plan amount to \$158,000,000, or over 78 per cent of all such bonds in the hands of the public, and over \$23,500,000 of Puget Sound bonds, or about 90 per cent of all such bonds in the hands of the public. As compared with these figures, it was shown that the Jameson committee represents only a little over eight per cent of the refunding bonds and, apart from Mr. Jameson's individual and corporate holdings, only about two per cent.

Counsel for the reorganization managers further told the court that "the majority bondholders most emphatically insist that this court should not override the wishes of the vast number of investors represented by the bondholders' committee, including insurance companies, savings banks and trustees holding many million dollars of bonds, who are restricted by law in their investments, at the request of a fire insurance company which comes into court and boasts of its successful speculation in the bonds of insolvent corporations."

One of the principal contentions of the Jameson minority interests before Judge Wilkerson was the argument that the sale should be delayed in order to give an opportunity to pass legislation for the refunding at law interest of the Chicago, Milwaukee & St. Paul's debt to the government of \$55,000,000.

Replying to this argument, counsel for the reorganization managers told Judge Wilkerson today that two sessions have already failed to enact such legislation. It was further asserted that there is no assurance that it will succeed at the coming sessions of Congress. Assurance was given the court that if such legislation is enacted in time to take advantage of it in the St. Paul reorganization, an attempt will be made to effect an agreement with the Secretary of the Treasury for this anticipated modification of the present plan.

The majority bondholders vigorously contested the suggestions of the Jameson committee looking toward the separation of the Puget Sound Lines from the Eastern Lines of the Chicago, Milwaukee & St. Paul system. They urged that the integrity of the system be preserved as is, and stated that they intend to bid for the property in its entirety.

Counsel for the reorganization managers concluded their argument with the prediction that Mr. Jameson could liquidate his holdings of St. Paul bonds at a profit of more than \$250,000 at present market prices. They intimated that if Mr. Jameson is able to secure an appreciable delay, his personal profits in St. Paul bonds would exceed \$4,500,000.

The reorganization of the railroad and the lifting of the receivership, it was contended, were imperative needs and would result in rapid return of the system to a sound financial basis. Judge Wilkerson was told that every day's delay meant a heavy loss to the road by preventing economies of management which cannot now be effected because of the receivership.

The sale is divided into sections under Judge Wilkerson's order with assets grouped as follows:

Chicago, Milwaukee & Puget Sound, \$42,500,000.

Property subject to refunding mortgages other than that of the Puget Sound Railway, \$67,500,000.

Unpledged assets, \$12,500,000. Total, \$122,500,000.

Under the terms of the pending sale, each bidder must submit his plan for reorganization of the property. The highest bid will not be accepted before this plan is approved by the court.

Statement of Reorganization Managers.—Kuhn, Loeb & Co. and the National City Company, reorganization managers, have issued a notice to holders of securities involved in the reorganization plan reading as follows:

The District Court of the United States for the northern district of Illinois, eastern division, has fixed November 22, 1926, as the date for the foreclosure sale of the property of Chicago, Milwaukee & St. Paul.

They have been deposited under the plan and agreement of reorganization dated June 1, 1925, as modified November 19, 1925, more than \$158,000,000 of the bonds secured under the general and refunding mortgage (which secures all the above mentioned bonds except the Puget Sound bonds), or more than 78 per cent of such bonds outstanding in the hands of the general public, and more than \$23,500,000 of the Puget Sound bonds, or approximately 90 per cent of those bonds outstanding in the hands of the general public. In addition, Hon. Andrew W. Mellon, director

general of railroads, holder of a note of the Chicago, Milwaukee & St. Paul for \$20,000,000, for which \$32,000,000 of general and refunding mortgage bonds are pledged, has advised that he will accept the provisions of the plan in respect of that note if the reorganization is effected within a reasonable time. More than two-thirds of the outstanding preferred stock and common stock of the St. Paul has also been deposited under the plan.

Bills which had been introduced in both houses of Congress to permit the refunding of the indebtedness of railroads (including that of Chicago, Milwaukee & St. Paul) to the government failed to come to a vote at the last session of Congress, but such legislation may be brought to a vote at the next session. If such legislation is enacted in time to permit it to be taken advantage of in the St. Paul reorganization, the reorganization managers will endeavor to effect an agreement with the secretary of the treasury and with the bondholders and stockholders committees constituted under the plan, for the refunding of all or part of the indebtedness of the St. Paul to the government and the necessary modification of the reorganization plan to that end.

However, the reorganization managers are firmly convinced that the reorganization must not longer be delayed in order to speculate upon the possibility of any form of Government assistance. The efficiency and prosperity of the railroad cannot be completely restored until the termination of the receivership. The maintenance of an efficient morale among the personnel of the property, the necessity of large capital expenditures, particularly for equipment, which cannot effectively be financed during the receivership, and the large expense necessarily inherent in any receivership, make it imperative that the reorganization be consummated and the receivership terminated as promptly as possible. Furthermore, delay in turning the property over to the new company results in withholding from bondholders the interest to which they will be entitled upon their new securities under the plan and which may be paid to them immediately upon the consummation of the reorganization.

Holders of bonds and stock of the above issues which have not yet been deposited under the plan may still participate in the reorganization, without penalty, by depositing their bonds or stock with the respective depositaries named below, and are urged to do so prior to November 22, 1926, the date fixed for the foreclosure sale.

CHICAGO & NORTH WESTERN.—Bonds.—The Interstate Commerce Commission has granted authority for the authentication and delivery of \$14,000,000 first and refunding mortgage gold bonds to be held by the carrier until further order of the commission.

DENVER & RIO GRANDE WESTERN.—Interest Will Not Be Paid.—The directors have decided not to pay the interest due November 1 on the general mortgage 5 per cent bonds. Under the plan of the organization these bonds are income bonds up to January 1, 1929, but the directors have the discretion of deciding whether the interest will be paid even if earned. It is stated that the deferring of the interest was considered advisable on account of the need of funds to carry out the extensive improvement program for 1926.

ILLINOIS CENTRAL.—Bonds and Equipment Trust Authorized.—The Interstate Commerce Commission, Division 4, has authorized an issue of \$35,000,000 of 40-year 4¾ per cent bonds, to be sold at not less than 93.65, and also an issue of \$4,665,000 of equipment trust certificates at 99.517. Terms and conditions governing the equipment trust issue were prescribed, but the text of the report has not yet been issued.

KANSAS CITY SOUTHERN.—Merger Proceedings.—The Interstate Commerce Commission has permitted the following to intervene and be treated as parties to the proceedings on the application for authority for the acquisition of control of the Missouri-Kansas-Texas by the Kansas City Southern and of the St. Louis Southwestern by the M-K-T: Missouri & North Arkansas; Paris & Mt. Pleasant, R. W. Wortham, receiver; American Short Line Railroad Association; Southern Pacific Company, and the Southern Pacific Texas lines.

NEW YORK CENTRAL.—Ninety-nine Year Lease.—Stockholders of the Michigan Central were enjoined on September 17 by the United States Circuit Court of Appeals at Grand Rapids, Mich., from taking action on the proposed 99-year lease of the road to the New York Central. The court issued an order that the Michigan Central stockholders must refrain from taking action on the lease until after November 22, unless the court otherwise orders it in the meantime.

NEW YORK CENTRAL.—Stockholders Approve Leases.—Stockholders of the New York Central, meeting at Albany, N. Y., on September 29, voted approval of the proposed lease of the Michigan Central, the Cleveland, Cincinnati, Chicago & St. Louis and the Chicago, Kalamazoo & Saginaw for 99 years and an increase of \$100,000,000 in the capital stock of the New York Central Railroad Company. The stockholders also approved the sale of \$20,000,000 of stock to employees of the New York Central.

READING.—Protest Against Tentative Valuation.—This company has filed a protest with the Interstate Commerce Commission against the tentative valuation of its properties as of 1917 in which the company sets out a claim of \$391,061,983. The

commission's figure for the final value of the property used was \$200,927,187.

TEXAS & NEW ORLEANS.—Lease of Texas and Louisiana Lines Proposed.—For the purpose of bringing about unification of control and operation of the Southern Pacific Lines in Texas and Louisiana, this company has applied to the Interstate Commerce Commission for authority to lease the properties of the Louisiana Western; Morgan's Louisiana & Texas Railroad & Steamship Company; Iberia & Vermilion; Franklin & Abbeville; Lake Charles & Northern; Houston & Shreveport; Galveston, Harrisburg & San Antonio; Houston & Texas Central; Houston East & West Texas; Southern Pacific Terminal Company, and San Antonio & Aransas Pass. It is also proposed to assign to the applicant the existing lease of the San Antonio & Aransas Pass to the Galveston, Harrisburg & San Antonio. The lines comprise a total of over 4,000 miles and practically all of the stock of the applicant as well as of the other carriers is owned by the Southern Pacific, except that practically all of the stock of the Iberia & Vermilion and of the Franklin & Abbeville is owned by the Morgan's Louisiana & Texas Company. The proposed leases are for a term of one year beginning on the first day of the month following the effective date of the authorization by the commission, but they run until terminated by thirty days' notice from one of the parties to the other. The application says that while for all rate-making purposes the properties are considered and dealt with by the Interstate Commerce Commission and the state commissions as a unit under common ownership, management and control, nevertheless the carriers find it necessary to maintain separate organizations in Texas and Louisiana, as a result of which they are unable to realize as fully as the public interest requires the economies which will result from complete unification of control and operation.

WABASH.—Bonds.—The Interstate Commerce Commission has authorized the issuance of \$15,500,000 refunding and general mortgage 5 per cent bonds, series B, to be sold to Kuhn, Loeb & Co. at not less than 93. Of this issue \$4,561,876 represents reimbursements for expenditures made prior to January 1, 1925, and \$10,938,124 to provide for or be a reimbursement of expenditures made in 1925 or 1926. Included is the payment of a note to the Director General of Railroads for \$1,500,000 and the retirement of bank loans amounting to \$2,500,000.

Average Price of Stocks and Bonds

	Sept. 28	Last Week	Last Year
Average price of 20 representative railway stocks	104.28	103.35	87.61
Average price of 20 representative railway bonds	98.01	98.02	91.82

Valuation Reports

The Interstate Commerce Commission has issued valuation reports, final or tentative, stating the final value for rate-making purposes of the property owned and used for common-carrier purposes, as of the respective valuation dates, as follows:

FINAL REPORTS		
Ellerton & Eastern	\$327,493	1918
Carolina & Northeastern	138,279	1919
Kelly's Creek & Northwestern	105,000	1918
TENTATIVE REPORTS		
York, Hanover & Frederick	\$1,750,000	1918

Dividends Declared

Boston, Revere Beach & Lynn.—1½ per cent, quarterly, payable October 1 to holders of record September 22.
Georgia Railroad & Banking Company.—2½ per cent, quarterly, payable October 15 to holders of record October 2.
Manhattan Railway.—7 per cent guaranteed, 1¾ per cent, quarterly, payable October 1 to holders of record September 24.
Midland Valley.—\$1.25, payable October 15 to holders of record September 30.
New London Northern.—2¼ per cent, quarterly, payable October 1 to holders of record September 16.
Northern Railroad of New Hampshire.—1½ per cent, quarterly, payable October 1 to holders of record September 13.
Panama Railroad.—5 per cent, for the fiscal year ended June 30, 1926.
Reading Company.—Common, 2 per cent, quarterly, payable November 11 to holders of record October 14.
York Railways.—Common, \$.75, quarterly, payable October 16 to holders of record October 6. Preferred, \$.62½, quarterly, payable October 31 to holders of record October 21.

Railway Officers

Executive

Paca Oberlin, a member of the staff of examiners of the Interstate Commerce Commission, has resigned to become assistant to the vice-president of the Erie, with headquarters at New York.

Charles S. Churchill, vice-president in charge of purchases, real estate and valuation of the Norfolk & Western, retired under the age limit from active service on September 30,



C. S. Churchill

after 40 years of service and will open offices for the general practice of engineering in Roanoke, Va. Mr. Churchill was born in New Britain, Conn., on September 22, 1856, and received his early education at the grammar and high schools of New Haven, Conn., and was graduated from Yale University in 1878. He began his railway career as a transitman in the service of what was then known as the "Parallel Railroad," a railroad which contemplated paralleling the tracks of the

New York, New Haven & Hartford from New York to Providence, R. I. In 1880 he became field engineer for the Meadville & Linesville, now a part of the Bessemer & Lake Erie. From July, 1881, to November, 1883, he held the position of division engineer on the Pittsburgh, McKeesport & Youghiogheny, now a part of the Pittsburgh & Lake Erie. In January, 1884, he became principal assistant engineer on the location and construction of the Schuylkill valley line of the Pennsylvania, between Hamburg, Pottsville and Wilkes-Barre. On May 1, 1888, Mr. Churchill became connected with the Norfolk & Western in the position of engineer in charge of the preliminary and location surveys for the Ohio extension. On October 1, 1888, he was promoted to the position of engineer of maintenance of way, with headquarters at Roanoke, Va. On July 1, 1903, he became chief engineer of the Norfolk & Western and served in this capacity until May, 1913, when he was selected to act as chairman of the valuation committee of the same railroad. In March, 1914, he was appointed assistant to the president, in which position he served until October, 1918, when he was appointed vice-president. From March 1, 1920, until the date of his retirement, he served as vice-president in charge of purchases, real estate and valuation.

Col. W. S. Battle, Jr., general claim agent of the Norfolk & Western, with headquarters at Roanoke, Va., has been appointed vice-president in charge of valuation, real estate, and public relations, with the same headquarters. A change in jurisdiction has been effected by the company, Mr. Battle taking over part of the duties of **C. S. Churchill**, vice-president in charge of purchases, real estate, and valuation, who resigned on September 30. The position of vice-president in charge of purchases, real estate and valuation has been abolished, while the position of vice-president in charge of valuation, real estate and public relations has been newly created.

Financial, Legal and Accounting

Thomas J. Cole has been appointed assistant general attorney on the Missouri Pacific, with headquarters at St. Louis, Mo., succeeding **Merritt U. Hayden**, resigned.

Thomas Balmer, for six years an attorney for the Great Northern at Seattle, Wash., has been promoted to assistant general attorney, with headquarters at St. Paul, Minn.

William H. Whitehead, former auditor general of the Lehigh & New England, has been appointed comptroller of the Reading, with headquarters at Philadelphia, succeeding **A. B. Bierck**, deceased.

J. B. Baskerville, assistant general claim agent of the Norfolk & Western, with headquarters at Roanoke, Va., has been promoted to general claim agent, with the same headquarters, succeeding **W. S. Battle, Jr.**

Operating

T. A. Dempsey, superintendent of dining cars of the Chicago, Rock Island & Pacific, since 1912, with headquarters at Chicago, retired on September 1.

W. M. Murphey has been appointed assistant terminal trainmaster of the Baltimore & Ohio, with headquarters in Philadelphia, Pa., succeeding **E. L. Allnutt**, transferred.

H. R. Lake, acting superintendent of transportation of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, has been promoted to superintendent of transportation, with the same headquarters.

J. A. DeWolf, trainmaster on the Saskatchewan district of the Canadian Pacific, with headquarters at Weyburn, Sask., has been appointed fuel agent, with headquarters at Calgary, Alta., and will be succeeded by **W. Manson**, superintendent of weighing and refrigeration.

Joseph H. Redding, who has been appointed general superintendent of the Western division of the Pennsylvania, with headquarters at Pittsburgh, Pa., was born in Philadelphia, Pa.,

on November 26, 1877. He received his education in the public schools of Philadelphia, and first entered railroad service on May 1, 1897, as a draftsman in the general offices of the Pennsylvania at Philadelphia. In May, 1905, he became a transitman on the Middle division of the Pennsylvania, and served in this capacity until June, 1905, when he was promoted to assistant supervisor of the Pennsylvania & Northwestern, a subsidiary of the Pennsylvania. From December, 1907, until October, 1917, he served consecutively as supervisor on three divisions of the Pennsylvania, and on October 1, 1917, was promoted to division engineer, serving in this capacity on the West Jersey & Seashore, Middle division, and the New York division. In March, 1920, he was promoted to assistant superintendent of the Pittsburgh division. On November 28, 1920, he became superintendent of the Wheeling division, and served subsequently as superintendent of three divisions until his recent promotion.



J. H. Redding

J. B. Parrish, general manager of the Chesapeake & Ohio, with headquarters at Richmond, Va., has been appointed assistant vice-president, with the same headquarters. **G. D. Brooke**, assistant to the vice-president in charge of operation, with headquarters at Richmond, Va., has been promoted to general manager, with the same headquarters. **A. T. Lowmaster**, superintendent of transportation, with headquarters at Richmond, Va., has been appointed general superintendent of transportation. The positions of assistant vice-president and general superintendent of transportation are new.

L. A. Grubbs, assistant superintendent of the Chesapeake & Ohio at Roncerverte, W. Va., has been appointed superintendent of the Clifton Forge division, with headquarters at Clifton Forge, Va., succeeding **J. F. Briant**, transferred. **E. D. Glenn**, trainmaster of the James River sub-division, with headquarters at Clifton Forge, Va., has been appointed assistant superintendent of the Clifton Forge division, with headquarters at Roncerverte, W. Va., succeeding Mr. Grubbs. **W. S. Goode**, chief train dispatcher of the Clifton Forge division, with headquarters at Clifton Forge, has been appointed trainmaster of the James River sub-division, with the same headquarters, succeeding Mr. Glenn. **S. M. Perry** has been appointed chief train dispatcher of the Clifton Forge division, with headquarters at Clifton Forge, succeeding Mr. Goode.

Horace E. Newcomet, who has been promoted to general manager of the Western region of the Pennsylvania, with headquarters at Chicago, was born April 27, 1874, at Philadelphia, Pa., and was graduated from the University of Pennsylvania in 1894. He began railway work in February, 1896, as an assistant on the engineer corps of the Chicago division of the lines west of Pittsburgh, and in 1897 he was promoted to acting assistant engineer on the Cleveland and Pittsburgh division. He served as assistant engineer maintenance of way of the Cincinnati division from 1898 to 1901, when he was promoted to engineer maintenance of way of the Indianapolis and Vincennes division, where he remained until 1903, when he was transferred to the Cincinnati division. In 1905 he was transferred in the same capacity to the Erie and Ashtabula division and in 1906 was appointed division engineer of the Cleveland and Pittsburgh division. He remained in this position until January, 1913, when he was promoted to superintendent of the Louisville division, with headquarters at Louisville, Ky. From March, 1918, to March, 1920, he served as superintendent of the Logansport division and was then transferred to superintendent of the Cleveland and Pittsburgh division, with headquarters at Cleveland, O., remaining there until March, 1923. At that time he was promoted to general superintendent of the Lake division, with the same headquarters, a position he held until his promotion to general manager of the Western region.



H. E. Newcomet

Engineering, Maintenance of Way and Signaling

H. J. Bogardus has been appointed division engineer on the Pt. Huron-Grand Rapids division of the Pere Marquette, with headquarters at Saginaw, Mich., succeeding **J. E. Johnson**, deceased.

A. Craine, engineer maintenance of way on the Missouri district of the Chicago, Burlington & Quincy, with headquarters at St. Louis, Mo., resigned on October 1, to become a representative of the American Hoist & Derrick Company, with the same headquarters.

P. Petri, division engineer of the Baltimore & Ohio, with headquarters at Cumberland, Md., has been promoted to engineer maintenance of way, with headquarters at Baltimore, Md., succeeding **E. G. Lane**, who has been assigned to other duties. **A. R. Carver**, division engineer, with headquarters at Connellsville, Pa., has been appointed division engineer, with headquarters at Cumberland, Md., to succeed Mr. Petri. **J. L. Maher**, division engineer, with headquarters at Grafton, W. Va., has been appointed division engineer at Connellsville, Pa., succeeding Mr. Carver.

G. B. Farlow, division engineer, with headquarters at Weston, W. Va., has been appointed division engineer at Grafton, W. Va., succeeding Mr. Maher. **C. E. Newhouse**, has been appointed division engineer, with headquarters at Weston, W. Va., succeeding Mr. Farlow.

Traffic

A. L. Preston, who has been promoted to general eastern freight agent of the Canadian Pacific, the Minneapolis, St. Paul & Saulte Ste. Marie and the Duluth, South Shore & Atlantic, with headquarters at New York, was born at Dubuque, Iowa, and was educated at Notre Dame University, South Bend, Ind. He entered railway service in 1891 as a clerk in the general office of the Soo Line at Minneapolis, Minn., and later he was promoted to contracting freight agent at St. Paul, Minn. In 1904, he was appointed general agent on the Canadian Pacific at Winnipeg, Man., and in 1908 he returned to the Soo Line in the same capacity at St. Paul.



A. L. Preston

From 1916 to 1921, he served as assistant general freight agent at both Minneapolis and St. Paul. He was then appointed general agent at New York for the Canadian Pacific, the Soo Line and the Duluth, South Shore & Atlantic, which position he held until his recent appointment as general eastern freight agent at New York, for the same railroads.

L. R. Robinson, who has been promoted to general New England freight agent of the Canadian Pacific, with headquarters at Boston, Mass., began his railway work in 1880 as a billing clerk in the Milwaukee, Wis., office of the Michigan Central. From 1881 to 1883, he acted as joint billing clerk at Milwaukee for the Wabash, the Union Steamboat Company, the Erie and the American Refrigerator Transit, and during the next four years he held various positions on the Chicago, Milwaukee & St. Paul, including typing clerk, claim clerk, billing clerk and cashier. In 1887 he was promoted to chief clerk in the local freight office at North Milwaukee, Wis., and in 1889, he was appointed general traveling agent for the Lehigh and Wabash Dispatch at Chicago, where he remained until 1893 when he was appointed general agent for the Northern Steamship Company and the Great Northern at St. Paul, Minn., and Minneapolis. During 1895, he served as general agent for the Union Transit Company and in the following year he was promoted to general western agent, with headquarters at Duluth, Minn., where he remained until 1904, when he became joint agent for a number of steamship lines at San Francisco, Cal. In 1905, he returned to the Lehigh and Wabash Dispatch as assistant manager at Chicago and in the next year he was appointed general pas-



L. R. Robinson

senger and freight agent for the Wabash at San Francisco. From 1908 to 1914, he served as assistant general manager for the Canadian Pacific Dispatch, with headquarters at Boston, and he was then appointed general agent for the same company at Boston, a position he held until his recent promotion to general New England freight agent for the Canadian Pacific.

N. W. Hawkes, New England traffic manager of the Canadian National & Central Vermont, with headquarters at Boston, has been appointed freight traffic manager of the



N. W. Hawkes

Canadian National and Grand Trunk systems in Canada and the United States, with headquarters at Montreal, Que. He will still continue as New England traffic manager in addition to his new duties. Mr. Hawkes was born at Appleton, Me., on July 21, 1882, and was educated at Cambridge University. He entered railway service on October 1, 1900, with the Grand Trunk. On December 1, 1915, he became general freight agent of the Central Vermont, with headquarters at St. Albans, Vt., which position he held until January, 1920, when he was elected chairman of the New England Freight & Passenger Association, with headquarters in Boston, Mass. On January 1, 1924, he became New England traffic manager for the Central Vermont, Canadian National and Grand Trunk, with headquarters in Boston, Mass., which position he held until the time of his recent appointment.

Mechanical

O. A. Garber, assistant chief mechanical officer of the Missouri Pacific, with headquarters at St. Louis, Mo., has been appointed chief mechanical officer, with the same headquarters, succeeding W. H. Fetner, deceased. **D. R. Rodgers**, office manager for the chief mechanical officer, has been appointed assistant to the chief mechanical officer, with the same headquarters.

M. W. Hassett, who has been appointed assistant superintendent of motive power of the New York Central, with headquarters at New York, was born on May 29, 1875, at Crittenden, N. Y. He received his education at Niagara University, and first entered railroad service on July 1, 1896, as a telegrapher with the New York Central. He entered the motive power department of the same company in December, 1899, and was promoted to master mechanic, with headquarters in Buffalo, N. Y., on December 15, 1909. In September, 1920, he was appointed general master mechanic of district number 2, with headquarters at Buffalo, N. Y., which position he held until his recent appointment as assistant superintendent of motive power.

Ray M. Brown, who has been appointed superintendent of motive power of the New York Central, was born in Ash-tabula, O., on April 9, 1879. He was educated in the public schools, and first entered railroad service on October 9, 1899, as a machinist's apprentice with the Lake Shore & Michigan Southern, with headquarters at Cleveland, O. He subsequently held the position of machinist and draftsman until April, 1910, when he was promoted to the position of chief draftsman, with headquarters at Elkhart, Ind. In September, 1911, he was promoted to designer, with headquarters at Cleveland, O., and served in this capacity until March, 1912, when he was appointed assistant engineer, with the same headquarters. In September, 1915, he became assistant engineer of the New York Central, with headquarters at New

York, and in May, 1924, was promoted to assistant superintendent of motive power, which position he held until the time of his recent appointment as superintendent of motive power.

W. H. Flynn, who has been appointed general superintendent of motive power of the New York Central, with headquarters in New York, was born on June 24, 1877, at Buffalo, N. Y. He was graduated from the Michigan Agricultural College, and entered railway service in September, 1899, as a draftsman in the offices of the Cleveland, Lorain & Wheeling. From September, 1900, to March, 1902, he held the position of draftsman in the mechanical engineer's office of the Michigan Central. In March, 1902, he was promoted to assistant foreman, and, later, to general foreman of the Jackson locomotive shops, which position he held until September, 1907. From September, 1907, to June 1, 1912, he served as master mechanic at St. Thomas, Ont. On June 1, 1912, he was promoted to superintendent of motive power of the same road, and in April, 1925, was transferred to New York, as superintendent of motive power on the New York Central, which position he held until his recent appointment as general superintendent of motive power.

J. W. Dodge, superintendent of fuel conservation of the Illinois Central, with headquarters at Chicago, who retired on August 1, was born on July 29, 1856, at Waterloo, Wis.,



J. W. Dodge

and entered railway service in April, 1880, as a clerk in the office of the superintendent of the Illinois Central at Centralia, Ill. Three months later he was promoted to chief clerk to the superintendent and in July, 1881, he was transferred to Cairo, Ill. In July, 1882, he accompanied the general manager as secretary during an inventory of the Chicago, St. Louis & New Orleans just prior to its transfer under lease to the Illinois Central, and on his return was promoted to assistant agent at Cairo and later to acting agent and commercial agent at the same point. From July, 1887, to April, 1890, he served as chief clerk to the general superintendent at Chicago, following which he resigned on account of his health, and spent five years on the Pacific coast, four of them as secretary of the Chamber of Commerce of Seattle, Wash. He returned to railway service in January, 1896, as a clerk in the mechanical department at Chicago, where he remained until April, 1897, when he was transferred to Memphis, Tenn., as chief clerk to the superintendent. In July, 1901, he was transferred to Water Valley, Miss., and in July, 1905, he was promoted to supervisor of trains and tracks at Durant, Miss., where he served until October, 1908. He then returned to Memphis as chief clerk to the general superintendent and later was transferred to New Orleans. From July, 1911, to May, 1912, he was division superintendent at Vicksburg, Miss., and was then promoted to inspector of transfers at Chicago. In January, 1924, he was appointed to the newly created position of superintendent of fuel conservation, which he held until his retirement. From 1922 to 1925, Mr. Dodge served as the vice-president of the International Railway Fuel Association and as president of the same organization during 1925-1926.

Purchases and Stores

E. H. Grometer, general foreman of stores on the Chicago, Burlington & Quincy, with headquarters at Aurora, Ill., has been appointed storekeeper at Plattsmouth, Neb., succeeding

C. E. Swanson, who has been appointed storekeeper, with headquarters at Denver, Colo.

C. C. Kyle, general storekeeper of the Northern Pacific, with headquarters at St. Paul, Minn., who has been promoted to purchasing agent to succeed **R. J. Elliott**, promoted to director of purchases, entered railroad service in 1892, as a stenographer on the Northern Pacific at Brainerd, Minn. Later he was promoted to chief clerk at Brainerd and he occupied both positions until 1904, when he was transferred to St. Paul as chief clerk in the mechanical department. In 1916, he was promoted to superintendent of the general office building at St. Paul where he remained until 1921, when he was appointed acting general storekeeper, with the same headquarters. In the next year he was appointed general storekeeper, a position he held until his recent promotion to purchasing agent.



C. C. Kyle

Robert J. Elliott, purchasing agent of the Northern Pacific, with headquarters at St. Paul, Minn., who has been promoted to director of purchases, with the same headquarters, was born at Louisville, Ky., and began railway work as a clerk in the accounting department of the Northern Pacific, in March, 1892. A short time later he was transferred to the staff of the general manager, and after serving the company in various capacities he was, in 1905, promoted to general storekeeper, with headquarters at St. Paul. In 1907, he was promoted to assistant purchasing agent, with the same headquarters, where he remained until 1921, when he was again promoted to purchasing agent. He held this position until the recent enlargement of the purchasing organization which he will continue to direct from the newly created position of director of purchases.



R. J. Elliott

Obituary

William O. Cook, master mechanic on the Denver & Rio Grande Western, at Denver, Colo., from 1923 to 1925, died at his home in Denver on September 18.

C. B. Daily, master mechanic of the Chicago, Rock Island & Pacific, with headquarters at the Forty-seventh street shops, Chicago, died on September 23.

William V. Kronish, chief photographer of the New York Central and widely known in his profession, died in New Haven, Conn., on September 29, after a short illness from pneumonia.

Walter G. Tubby, who resigned as general storekeeper of the Great Northern in 1905, to become chief of the division of materials and supplies of the Isthmian Canal Commission, died on September 22 at Seattle, Wash., from heart trouble.

John Patterson Ramsey, retired railway officer, died at his home in Charlotte, Vermont, on September 24, 1926. He was born in Covington, Ky., November 21, 1864. He started railroading as an assistant on the engineering corps of the Cincinnati, Hamilton & Dayton in 1885. He was track supervisor of the same road from 1887 to 1890, roadmaster of the Fort Wayne, Cincinnati & Louisville, 1890 to 1891, engineer of maintenance of way of the Columbus, Hocking Valley & Toledo, 1891 to 1892; superintendent in charge of construction of the Ohio Southern, 1892 to 1894. He was roadmaster of the Chicago, Peoria & St. Louis and the Litchfield, Carrollton & Western from 1894 to 1895, engineer of maintenance of way of the Peoria & Pekin Union from 1895 to 1896, and general manager of the Rio Grande, Sierra Madre & Pacific from 1896 to 1898. During the period from 1898 to 1904 he was connected with the last named road and also was general manager of the Chihuahua & Pacific and president of the El Paso & Southern. From 1904 to his retirement in 1914, he was connected with the Chicago, Peoria & St. Louis in the capacities of general manager and director, vice-president, president, receiver and chief executive officer and was president and general manager and a director and member of the executive committee of the reorganized Chicago, Peoria & St. Louis. During this same period he was president of the Alton Terminal Railway, director and member of the executive committee of the Peoria & Pekin Union and the Missouri & Illinois Bridge & Belt Railway. He was director and general manager of the Litchfield & Madison from 1906 to 1907.

Miss Emma S. Redel, assistant secretary of the Minneapolis & St. Louis, who died at her home in Minneapolis, Minn., on September 4, was born on September 24, 1880, at West Union, Iowa.

She received her education in the public schools at Marshalltown, Iowa, and entered railway service with the Iowa Central (now a part of the Minneapolis & St. Louis) at Marshalltown, about 1896. In 1908, she became a stenographer in the law department of the Minneapolis & St. Louis, and in 1911 she was promoted to chief clerk of that department. On August 1, 1917, she was again promoted to chief clerk to the president, a position she held along with her duties as assistant secretary, to which she was elected on November 16, 1922, until her death. In addition to her official duties with the railroad, Miss Redel was active in a number of outside business organizations. She was one of the organizers of the Railway Business Women's Association and served two years as its first president. At the time of her death she was chairman of the Ways and Means committee of the Board of Directors of the Business Women's Association of Minneapolis and a member of the Minneapolis Women's Rotary Club.



Miss Emma S. Redel

A 10 PER CENT increase in rates and fares on the Queensland Railways became operative on August 1. The rate increase is expected to result in an increased revenue of about \$3,500,000 a year. This amount will be insufficient, however, to make the Queensland Railways pay for themselves, as the loss during the year ended June 30, 1926, was \$8,000,000.